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The New Amberola **GRAPHIC**

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The New Amberola Graphic

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Editor's Notes

If you noticed a different address somewhere with this issue, you weren't seeing things. No, we haven't moved; the Town of St. Johnsbury, in its infinite wisdom, decided to renumber the entire village to comply with State 911 standards. Never mind that the old numbers worked very well for over a hundred years, and that countless people are now being confused and inconvenienced!

In the meantime, both old and new street numbers are supposed to work. We shall see...

— M.F.B.

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(better)

readers did not receive the last issue because they failed to notify us of a change in their address.

Don't let this happen to you! Let us know when you move (second class mail does not get forwarded automatically).

PHONOGRAPH FORUM

BY GEORGE F. PAUL

The "Jamestown" Phonograph

On a warm August morning in 1965, a young woman took a walk through her neighborhood in Jamestown, New York. The houses along Newman Street were evidence of the prosperity which existed in the city at the turn of the century. The large Victorian structures on their terraced yards still sat along the bricked streets for which Jamestown is noteworthy. As the young woman strolled along the sidewalks, she noticed a sign in front of one of the large homes, which read "HOUSE SALE." Intrigued, she went inside. Half an hour later, she emerged from the attic with a rocking chair and an old phonograph, which no longer played. Where or how to have it repaired was a problem to be addressed later. For now, the young woman would be content to just look at its pretty inlaid cabinet.

Thirty-three years later, the phonograph, still "voiceless," was sitting in the same woman's home, far from Jamestown. The persistence of a local collector finally convinced her to sell the phonograph she had owned for so long. She told the new owner the story above, not realizing that the city in which she found it would become a clue to help uncover the reason why this particular phonograph was built. This is, after all, a phonograph that isn't supposed to exist.

Experienced phonograph collectors will glance at the accompanying photographs and see what appears to be an Edison Diamond Disc Phonograph "A/B-275," or "SI-19." This was the "Sheraton Inlaid" model, which survived in the catalogue from late 1912 to August 1927. Such longevity is surprising, considering the relatively few machines of this model manufactured by Edison. To find an example is a treat for collectors. Yet, although an Edison cabinet, this is not and never was an Edison Phonograph. No holes exist inside for Edison motor mounts or a horn tube. No trace of an Edison decal can be seen. There is no "extra" hole for the crank. This machine remains as it was originally configured. Yet, the cabinet is undoubtedly the same cabinet covered in U.S. Design Patent no. 43,162 filed by Joseph Rubino, a prolific designer of cabinets for Edison. How then, did this "unauthorized" phonograph ever reach the market?

Examination of the motor and tone arm help to establish a general date of assembly. The motor is a Heineman Motor No. 77, a popular generic motor sold by the General Phonograph Corporation of New York City until late 1920. Likewise, the tone arm is a



#1: The "Jamestown Phonograph." The non-Edison crank and presence of a volume control directly behind it are the only exterior clues to its nature.

"Mutual" model sold by the William Phillips Service of New York City, and superseded by other models by late 1920. Through study of the pages of the *Talking Machine World*, the motor and other components of this machine may be attributed to the period of 1918-1920.

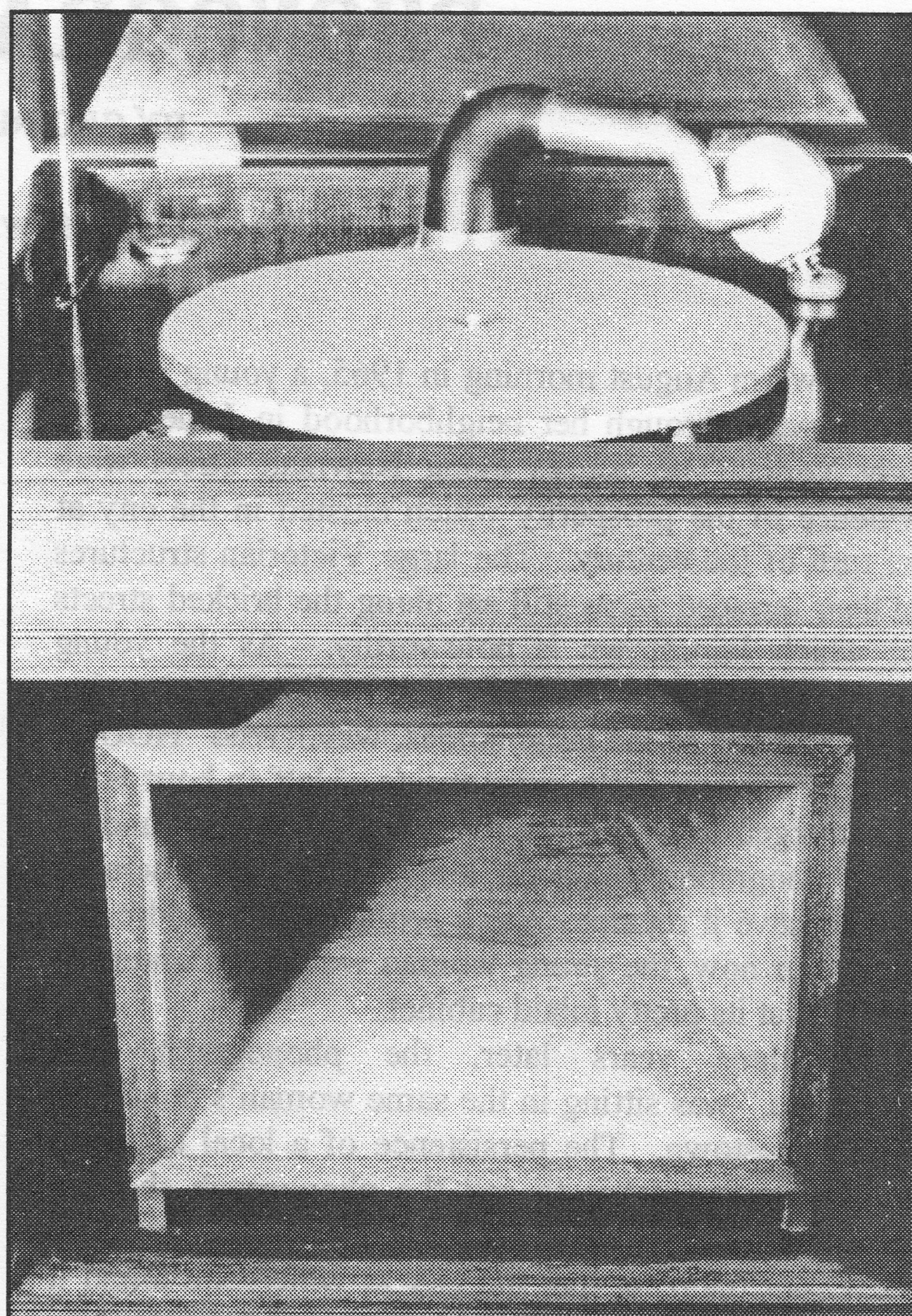
Perhaps the most telling evidence of this phonograph's origin is the documentation of wartime conditions faced by Thomas A. Edison, Inc. in 1918. During the last four months of that year, Edison's

Phonograph production was restricted to only three models: the disc C-250, C-150 and the cylinder Amberola 50. Since Edison did not manufacture its own cabinets, but relied on several independent cabinet factories for supplies, it is likely that some of these companies were faced with a cancellation of cabinet orders for models temporarily out of production. The "B-275" was one of these.

This leads us to Jamestown, New York, a well-known center for furniture manufacturing at that time. At least



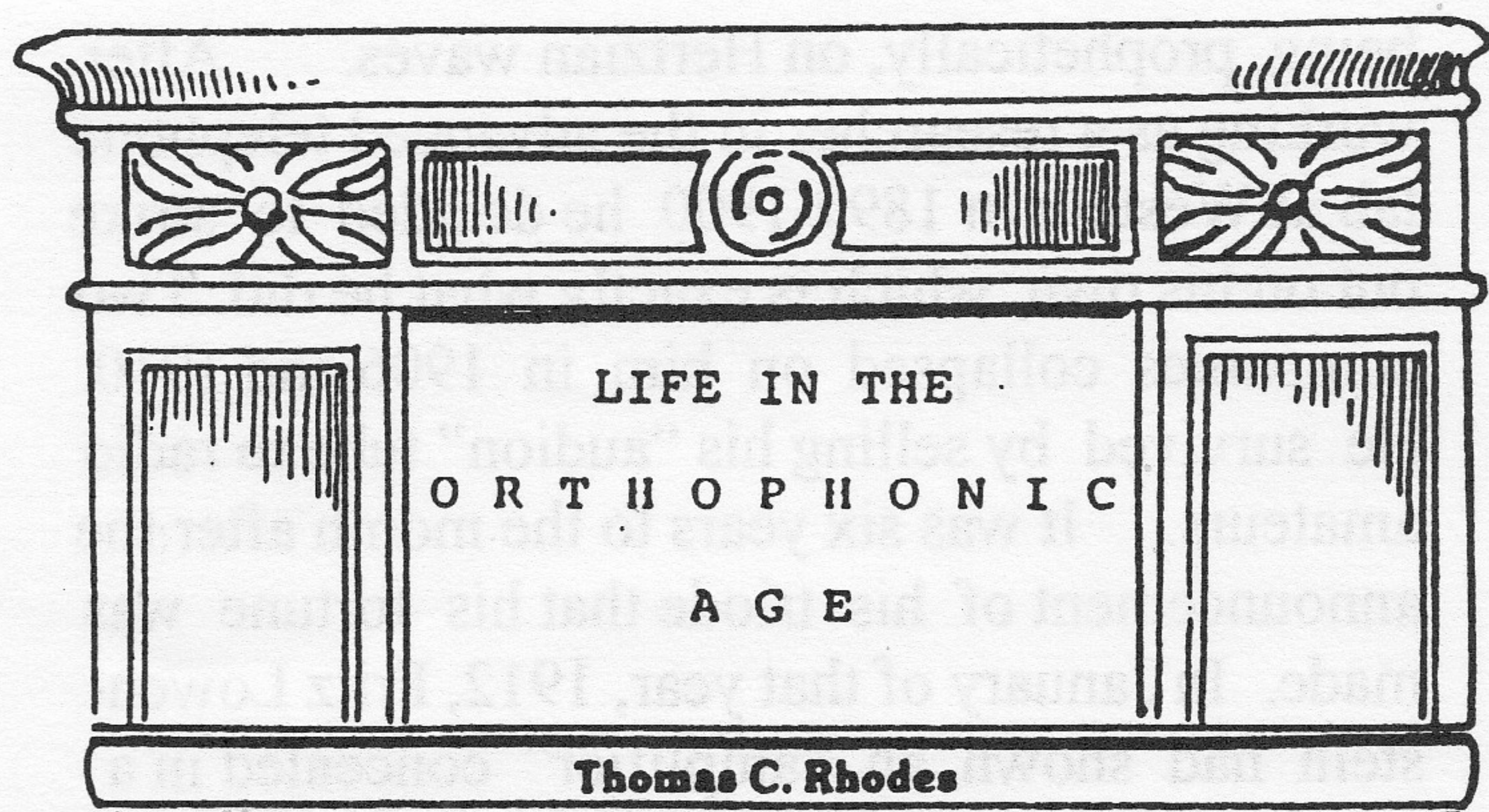
#2: Opening the lid reveals a generic "Mutual" tone arm and hardware from the Universal Stamping and Manufacturing Company of Chicago, Illinois. These and other components were widely used in a large number of off-brand machines in the 1918-1922 period.



#3: Removing the grille reveals a small but neatly made wooden horn supported by two short legs. The combination of a non-tapered tone arm and small horn made the volume control unnecessary! All hardware was gold-plated, indicating that the original assembler did not cut any corners. The brown mahogany cabinet itself is unusually well-made.

one local factory, The Jamestown Mantel Company, was manufacturing cabinets for Edison, and there were probably others. Whether in Jamestown or elsewhere, an independent factory suddenly in possession of a number of empty cabinets for which the contract was cancelled might well consider equipping them with generic parts and selling the completed machines locally, despite potential patent infringement. Such activity would necessitate "covering one's tracks" by omitting any nameplate, label or even chalk markings commonly found inside these cabinets, lest they be traceable to the source.

The "Jamestown Phonograph" fully meets this description. At least one other similar example exists, lending credence to the possibility of a small number of empty cabinets having been converted in this manner. It may no longer be possible to trace the origins of other machines of this type to determine a common ancestry, but the attic discovery of this example suggests surreptitious phonographic "manufacturing" in western New York State.



A BALANCED LOOK AT WESTERN ELECTRIC

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= Part 3 =

[Note: Parts 1 & 2 appeared in issues #98 and 99]

The fundamental beginnings of what became the Orthophonic Victrola, conceived as a succession of transmission wave filters, may be traced to the work of George A. Campbell, one of the most profound minds ever in the service of the Bell System. To him more than any other must be ascribed those highly advanced ideas which made the subsequent electronic advances much easier to develop and combine in order to use this technology in not only the most efficient manner but in manifold ways.

George Ashley Campbell was hired as the first full time mathematician for the Bell System. He was a Minnesotan, being born in Hastings, a city in the southeastern part of that state, in 1870. He first went to M.I.T. for an engineering degree but in 1892 got a master's in mathematics from Harvard. He also studied abroad at Gottingen, Vienna and Paris. He entered Bell service in 1897 and stayed there for over thirty-five years. He was a pioneer of NETWORK THEORY, or how electrons behave when going from one part of a circuit or component to another. His first paper of this trailblazing topic saw print in 1899. From this mathematical groundwork of network theory arose the corollary idea of MATCHED IMPEDANCE, a concept so central to the much later work of Maxfield and Harrison. Matched impedance, in which the flow of electrons happens with maximum efficiency by the least abrupt change in resistance through the parts of any circuit, was applied to tele-

phonic uses long before Western Electric and Bell ever encountered the talking machine.

The second major concept almost entirely the work of Campbell was that of the bandpass filter. This idea has to do with the selective filtering of unwanted frequencies in order to allow passage of the clearest signal possible. [Note: obviously by having separated signals on the same line, by putting a filter between them, one essentially has telephone line multiplexing.] It was first mentioned in a paper from 1903. Campbell had the mathematical formulas worked out between 1908 and 1910. Despite his cogent demonstration to T. D. Lockwood, chief patent attorney for AT&T, Mr. Lockwood, an inventor and engineering lecturer of note, simply could not follow the argument. By 1913 Carty, convinced of the rightness of the Campbell concept but unconvinced of its practicality, gave only a lukewarm appraisal to Lockwood, who was in no rush to file patents. It was only after transcontinental telephony was publicly demonstrated in January of 1915 that patents were filed, a full six years after Campbell had worked out his bandpass theory. Not until 1917 were these patents granted, giving the impression that the selective transmission filter was a product of war-time research. Both of these major ideas proved of immense help to the work of Colpitts, Arnold, Maxfield and Harrison.

It is now time to trace the development of those electronic devices which combined later became the tools for electrical disk recording. They would be a highly sensitive microphone, an efficient, stable, low distortion amplifier, and an electromagnetic disk cutter. These devices, all arising from the efforts of the Western Electric engineering staff, had somewhat individual histories and causes for their respective development. Some were the product of the need for highly sensitive measuring equipment for laboratory work. Others arose out of a project fostered by John Carty for a workable public address system. It would be to no avail to give a full account of the birth of every single invention leading to electrical recording and reproduction (just the improvements in wire making would take pages), along with an analysis of their theoretical background, patent history and subsequent realization in an account of this size, so only that information most relevant will be given an adequate treatment. The heart of the Western recording system was its amplifier, so this component will be discussed first.



G. A. Campbell



H. D. Arnold

What became the modern three element thermionic tube was a direct result of the search for a capable telephone repeater. As telephone lines became longer, the small current generated by the transmitter was reaching its limit to supply the receiver with a signal of proper strength and clarity. In 1899 George Campbell proposed that loading coils placed in the circuit would greatly reduce the signal losses inherent in long lines. His idea was independently confirmed by Dr. Pupin the following year. (Dr. Pupin, although not working directly for Bell, was closely tied by reason of certain inventions of his sold to them.) However brilliant this idea certainly was, it still did not strengthen the signal; it merely delayed its loss. In 1904 Herbert E. Shreeve (later working for Colpitts in his own Design Division) came up with a mechanical repeater. It proved costly, complex and able to handle only a very limited number of messages. Despite coming up with a variety of improved units it was only with the introduction of the vacuum tube that modern amplifiers came into usage. Edison must be credited with first observing what became known in experimental circles as the "Edison effect." Fleming, of England, added another element to this basic Edison bulb, calling it the Fleming valve. On October 20, 1906 Dr. Lee DeForest, a former Western Electric engineer, announced his three element tube (pat. No. 841,387) at the yearly meeting of the American Institute of Electrical Engineers held in New York City. He thought of the tube as a "detector" for weak signals, or in other words, a radio tube. DeForest, a brilliant scientist but a wretched businessman, was born in Iowa in 1873. He was a Yale graduate. He got his doctorate in physics in 1899, his dissertation

being, prophetically, on Hertzian waves. After working as a researcher in the advanced telephone lab at Western in 1899-1900 he decided to strike out on his own, which is exactly what he did. Two companies collapsed on him in 1906 and 1910. He survived by selling his "audion" tube to radio amateurs. It was six years to the month after the announcement of his triode that his fortune was made. In January of that year, 1912, Fritz Lowenstein had shown an "amplifier" concealed in a sealed compartment to Bell officials. It did not work very well and as Lowenstein would not say what was in the sealed box he was shown the door by Carty. (It later turned out to have a hidden DeForest tube along with a crucial improvement by Lowenstein.)

John S. Stone, a well regarded engineering consultant and former Bell employee from 1890 to 1899, heard of the Lowenstein incident and, suspecting what he had used, contacted DeForest to give him an opportunity. Stone called Carty (his former Bell colleague under Hammond Hayes) and interested his friend in this proposal. Two meetings took place, on October 30th and 31st. At the first meeting the "audion" performed badly, but Carty, wishing to be fair, agreed to a second try the next day. Unhappily for Lee DeForest his tube again behaved badly in the Western test room before the assembled Bell staff. DeForest agreed to leave the tube for more testing and so rescued himself from another failure. Despite its poor performance Carty was willing to further test the tube, with no great hopes. It was then that a young engineer from a recently formed division stepped forward to save the situation. It should be recalled that both Carty and Theodore Vail, president of AT&T, had given their word to the city fathers of San Francisco for a telephone hook-up from their city to New York in time for the opening of the Pan American Exposition in early 1915. Failure was unthinkable, so everyone at Bell was driven to fulfill this expectation.

It is fitting that what became the first modern electron tube was one begun by one DeForest and brought to perfection by another. That this young Western engineer was there to help in the salvation of this device may be traced to a conversation between F. B. Jewett and his good friend Prof. Robert A. Millikan. Jewett had asked Milliman in December of 1910 if he could recommend someone trained "in the new physics." Jewett might have been thinking of a

memorandum from George Campbell written in 1907, envisioning the need for "harnessing the stream of electrons" to better the telephone. Campbell essentially came up with the concept of electronic amplification of the voice in these 1907 notes but in the scramble caused by moving Boston Bell labs to New York no one had time to follow up on this brilliant theory. At any rate, Dr. Millikan, with no hesitation, told Jewett about his brilliant graduate fellow, Harold DeForest Arnold. Less than a month later, in January 1911, found Arnold working for Colpitts in the newly established Research Branch. Soon afterwards, after a successful showing of his complex mercury vapor amplifier, Arnold was given his own research group (Division A). Jewett was most precise in his charge to the new division head. Arnold was to investigate at every level the use of the electron for the purposes of telephonic improvement.

When given the DeForest invention to evaluate at the beginning of November, Arnold told Carty and Jewett that he could make it work properly IF it could be converted into a high vacuum, high efficiency unit. He was promised the tool to accomplish this (a costly, powerful vacuum pump was immediately ordered from Germany) but told to go ahead with preliminary testing while await for the pump. At the Western labs, built years before (some before 1900, others for the Shreeve repeater in 1904, many afterwards) were bank after bank of telephone testing circuits, simulating every possible phone set-up Bell made. Into these test simulators the Arnold team s[pl]iced the "audion." They of course noticed the prior erratic performance, but also that even when the tube was stable the quality of the voice transmission changed not only with each tube but with the same tube inserted into different test circuits. According to one account, it was Carty who first suggested capturing these variations on a "phonograph recorder." Supposedly a disk recorder was secured by low level employees through the New York office of Columbia Graphophone. The results of this endeavor were very poor, the records made from the tests having more distortion than the misbehaving "audion." Admitting these drawbacks, Carty said something about "an improved recorder," but there was not a moment to spare on such a suggestion or on the voice quality issue. All hands in Research were needed on the triode project, so the disk recorder was put into storage, forgotten save by Arnold. It was unfortunate that at this time the Edison Diamond Disc was scarcely

getting underway. Had the Western Electric engineers been able to use this recorder and disk playback system, with its potential for better sound, their first impression of the disk record might not have been so disappointing. It should be added that this was largely a format advantage, given that vertically cut disks allowed for greater amplitude without a corresponding increase in the width of the groove section. The limitations inherent in acoustic recording still applied to either method. It should be stated that the later development of electrical recording in no way constituted an endorsement of lateral disk methods by the Western or its engineers. It was simply that when these first, rushed, and short-lived tests were made the Edison record and player were hardly themselves out of the factory.*

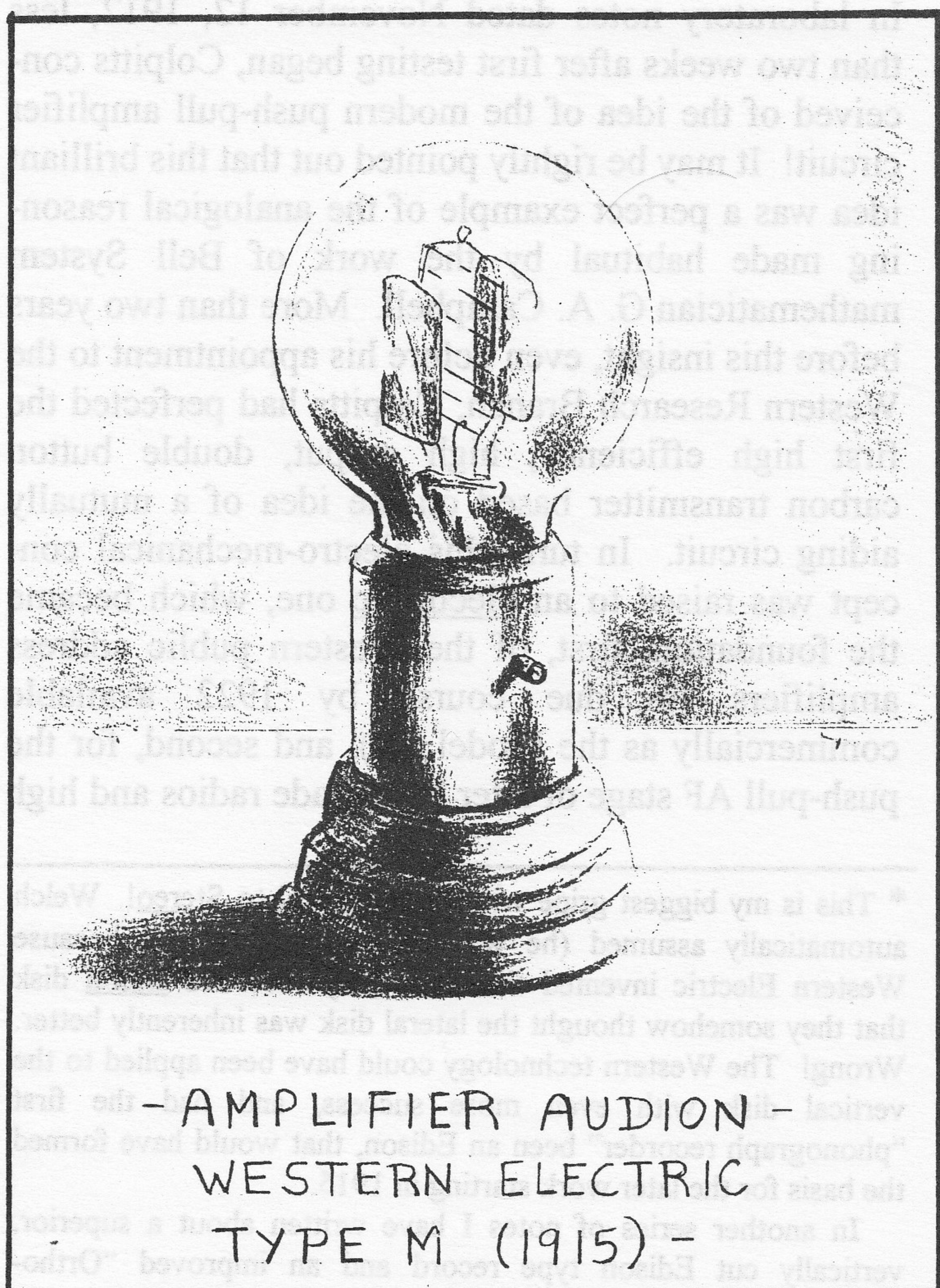
If the recording project was a small setback, it was more than made up by the insight of E. H. Colpitts. In laboratory notes dated November 12, 1912, less than two weeks after first testing began, Colpitts conceived of the idea of the modern push-pull amplifier circuit! It may be rightly pointed out that this brilliant idea was a perfect example of the analogical reasoning made habitual by the work of Bell System mathematician G. A. Campbell. More than two years before this insight, even before his appointment to the Western Research Branch, Colpitts had perfected the first high efficiency, high output, double button carbon transmitter based on the idea of a mutually aiding circuit. In turn, this electro-mechanical concept was raised to an electronic one, which became the foundation, first, of the Western public address amplifiers (in due course by 1922 available commercially as the Model 7A); and second, for the push-pull AF stage of later high grade radios and high

* This is my biggest gripe with From Tinfoil to Stereo! Welch automatically assumed (he was quite mistaken) that because Western Electric invented the electrically recorded lateral disk that they somehow thought the lateral disk was inherently better. Wrong! The Western technology could have been applied to the vertical disk with even more success, and had the first "phonograph recorder" been an Edison, that would have formed the basis for the later work starting in 1915.

In another series of notes I have written about a superior, vertically cut Edison type record and an improved "Ortho-Acoustic Reproducing Phonograph" that could have swept the field in 1922 if the paths of Western had been different and Edison less entrenched. An Edison/Western Electric phonograph, using electrically cut Diamond Discs using the powerful Colpitts amplifier, played through an exponential horn would have pushed the lateral disk industry into the trash heap had such an instrument been introduced in 1923!

fidelity phonographs. [Note: A full discussion of the patents for this and other Western Electric inventions dealing with electrical recording and reproduction will be given in a supplementary section.]

It was the Colpitts amplifier that was developed into those eventually used for the public address and disk recording and playback. By early 1913, when the special German pump had been installed at 463 West Street, the first tubes (Type A) were being hand-made by the Arnold team. By October of that year, the modern triode was being manufactured in small numbers at the Western plant. DeForest was paid \$50,000 in that same year for the rights to use this perfected version as a telephone repeater amplifier. As Arnold and Colpitts saw its other uses, DeForest was paid an additional \$90,000 for expanded rights in 1914. With this capital he was able to pursue his radio bent.



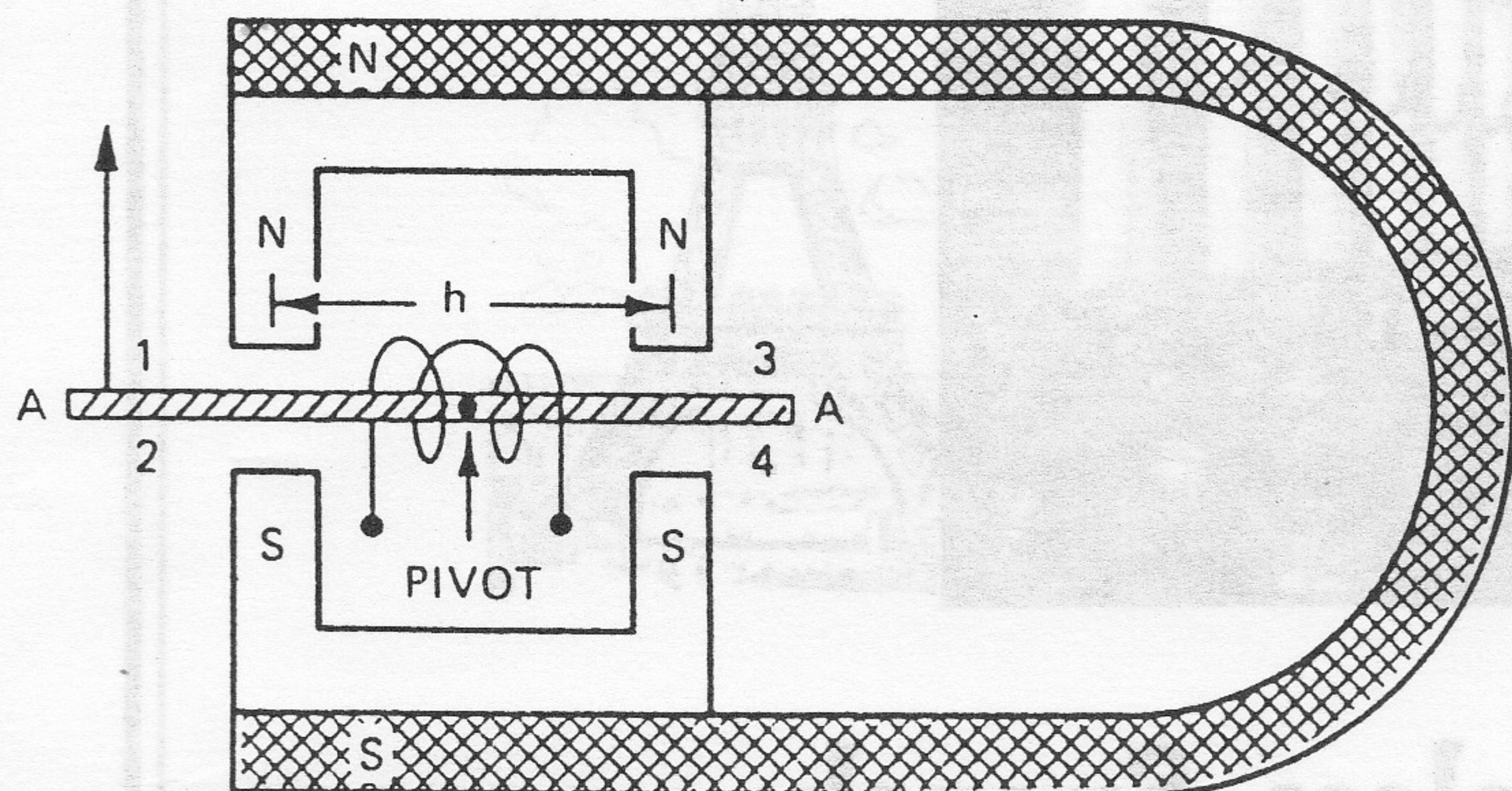
As stated before here (and in public relations literature as late as the Orthophonic period), the Colpitts amplifier was first used in the realization of the first workable public address system. As this apparatus later became the basis for the first all electric repro-

ducing phonographs, a brief sketch of this parallel development will shed further light on later Western Electric accomplishments. Although popularly associated with post-World War One advances, the search for an amplified public address system again began long before at Western. Its immediate ancestor was the speaker telephone. As early as 1908 the "speakerphone" was made on special order for business or commercial clients. The stock telephone receiver, not amplified, was simply coupled to a megaphone type horn, similar in size and appearance to those used on outside horn talking machines. It enabled a small group to hear what was said over the line, instead of just one person. These units were made on a limited basis for a number of years, appearing in early catalogues. In 1913 a more ambitious goal was achieved. Using a high voltage, water jacketed carbon transmitter, Western engineers allowed the governor of Oklahoma, speaking in Oklahoma City, to speak over an open wire circuit to a group in Tulsa, about 120 miles distant, numbering over 300 people.

In June of 1916 an article in The New York Times and other newspapers carried a statement by Mr. N. C. Kingsbury*, vice-president of AT&T that "his company was experimenting with a highly sensitive transmitter and receiver that would transmit any sound, no matter how casually the speaker addressed his audience." Actually, it was his Western Electric subsidiary, which did not always get the press mention it so rightly deserved. This article went on to tell how a version of this development had been successfully tried at a May 19, 1916 meeting of the Telephone Society of New York, held at the 71st Regiment Armory. Using a multitude of small receivers all of the 3250 persons in attendance "heard every word of the speaker." In addition, the system was connected by telephone lines with telephone societies in a dozen cities from the Atlantic to Pacific coasts, "and each individual in each city heard perfectly every word that was spoken." The highly sensitive transmitter was in fact the first modern condenser microphone used with an amplifier. This approach of using many small receivers was not the wish to employ an overly complicated solution to

* Nathan Corning Kingsbury, born in Mentor, Ohio on July 29, 1866; died on January 20, 1920. An officer with AT&T from 1911 to his sudden death in 1920. Coming from a military family, Kingsbury was highly involved in fostering Bell's efforts to improve military communications.

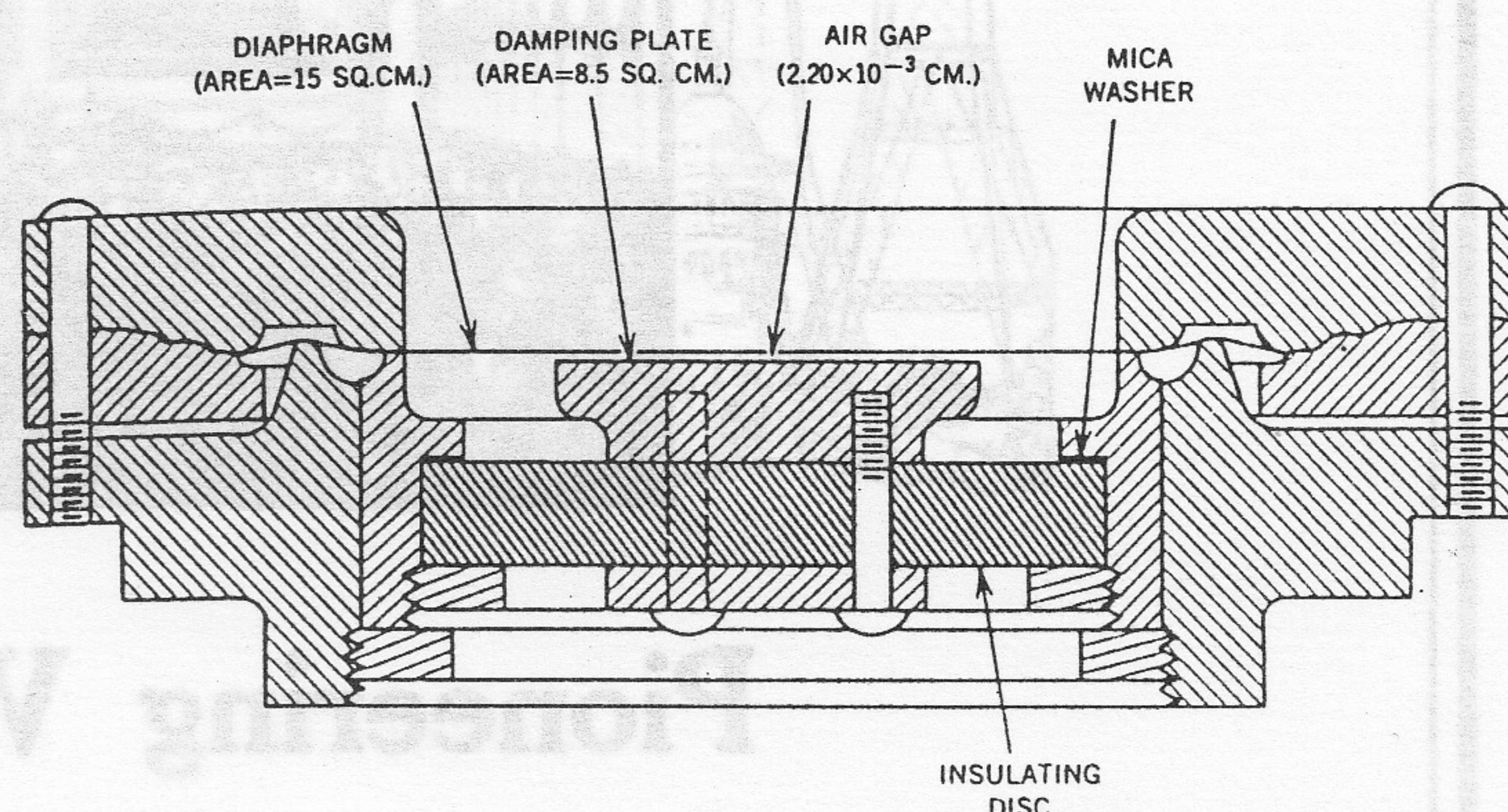
public address but merely to the fact that the magnetic loudspeaker was not ready for this demonstration. Less than sixteen months after this event the experimental loudspeaker was a fully developed fact. This balanced armature magnetic loudspeaker, the work of Western Electric's Henry Egerton, was based on still earlier work by none other than Thomas A. Watson, Bell's assistant. It will be given proper discussion later.



Shown above is a cutaway drawing of the basic scheme of the Wenthe condenser transmitter. He published his scientific paper detailing its use and development in "Physical Review," Vol. 10, 1917 as a companion paper to that by I. B. Crandall on the Thermophone.

The condenser principle, in connection with sound production, was first noted by C. F. Varley of England in 1870. Edison built a rough type of condenser transmitter in 1878, but lacking an amplifier could not use its tiny output with any known apparatus, either telephonic or phonographic. It remained for E. C. Wenthe of the Western staff to design and build a useful model. Edward Christopher Wenthe was born at the beginning of 1889 in Denver, Iowa. He was educated at both the University of Michigan and Lake Forrest. In 1914, shortly before joining Western, he received his electrical engineering degree from M.I.T. (His doctorate came from Yale, however, in 1918.) Upon being hired by Jewett after he made a recruiting visit there, Wenthe was assigned to the Colpitts Research Branch and given the microphone assignment by H. D. Arnold. This task was not given to him because the Western was lacking good transmitters but because Dr. Arnold needed an extremely precise way to record sound, partly to help Crandall in his work on improving the oscillograph. The common carbon granule transmitter was not good enough for such scientific research chiefly because of the variable way the carbon was packed. Despite improved versions, notably the first "double button" carbon

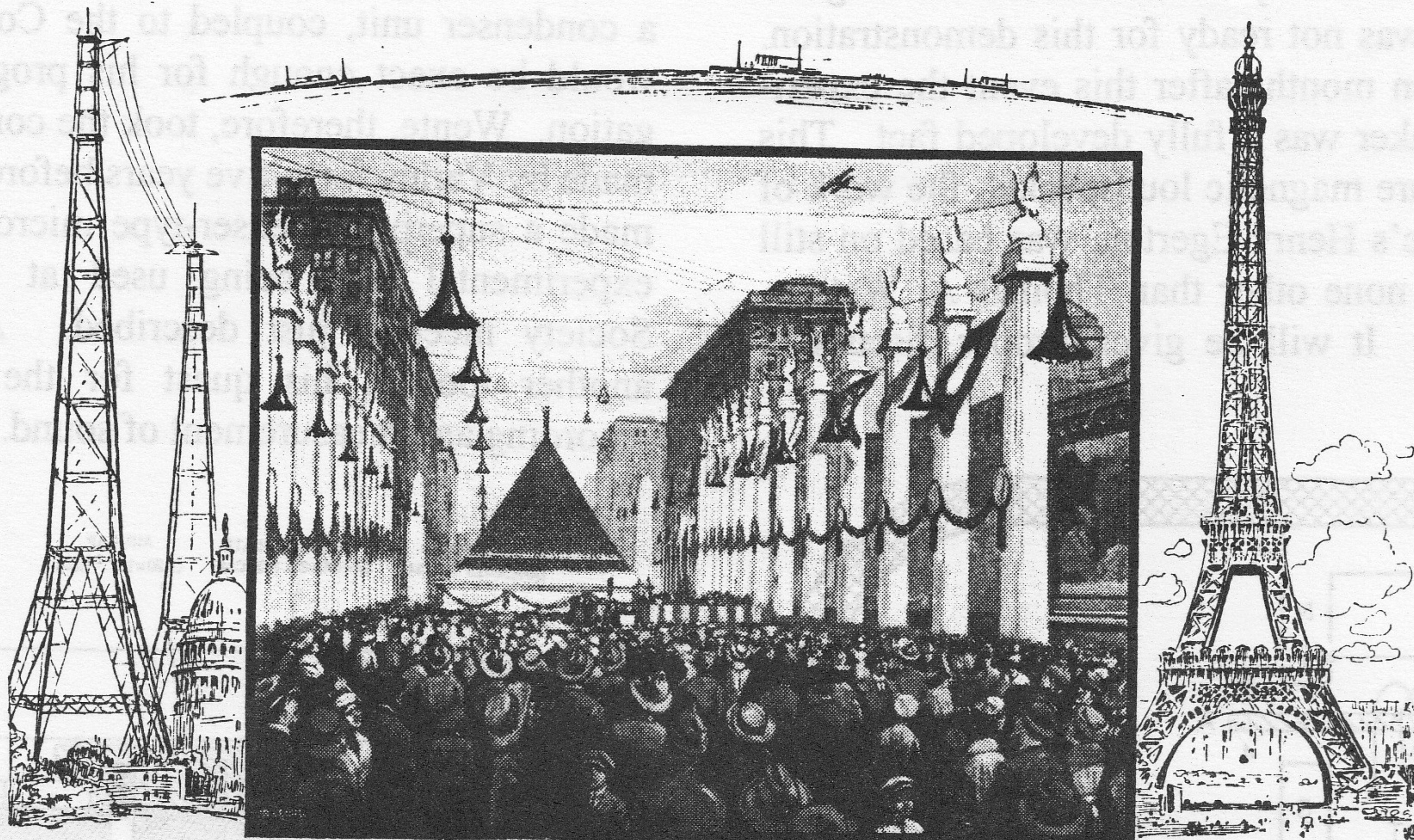
transmitter developed at Western in 1910, Arnold felt a condenser unit, coupled to the Colpitts amplifier, would be exact enough for his program of investigation. Wenthe, therefore, took the condenser findings made by Varley forty-five years before and from them made a superb condenser-type microphone, an early experimental unit being used at that Telephone Society meeting just described. Arnold had yet another tool in his quest for the highly precise recording and measurement of sound.



Shown here is a simplified schematic drawing of the magnetic driver "particularly suitable to loud speaking telephone receivers." Patent application was witnessed at Western Electric on December 29, 1917. It was this loudspeaking device used in the famous Liberty Loan "Victor Way" rallies of April, 1919. For hundreds of thousands of people this was their first encounter with such electrical reproduction of voice AND MUSIC.

The third component of the Western Electric recording system was its precisely calibrated electro-magnetic recorder. Its journey into realization was enormously helped by work done earlier to perfect the oscillograph by the least known and certainly least written about member of the Arnold team. While the work of Joseph P. Maxfield in adapting the principles of the electro-magnetic recorder to a very sensitive disk cutter has been discussed in most every history (most accurately in The Fabulous Phonograph by Roland Gellatt), the pioneer efforts of his colleague Irving B. Crandall have never been given their proper due.

Irving Bardshar Crandall, one of the youngest members of the Western team (and who died young at age 36), was born in Chattanooga, Tennessee in 1890. He graduated with honors from the University of Wisconsin at the age of only nineteen. He studied at Princeton and gained both his master's and doctor's graduate degrees there by 1916. In 1913 Dr. Jewett, on one of his famous recruiting trips to the leading colleges and universities, secured this young genius



Pioneering Wireless Speech

On the morning of October 22, 1915, an engineer speaking at Arlington, Virginia, was heard at Eiffel Tower, Paris, and at Pearl Harbor, Hawaiian Islands. This was the first trans-Atlantic and trans-continental message ever sent by wireless telephone. It was an achievement of the Bell System.

During the Fifth Liberty Loan nearly a million people, in throngs of ten thousand, heard speeches and music by wire and wireless. The loud-speaking equipment was a main feature of "Victory Way", New York. Wireless messages came from aviators

flying overhead and long distance speeches from Government officials in Washington. Messages were often magnified several billion times. This demonstration was the first of its kind in the history of the world. It also was an achievement of the Bell System.

Historic also were the war time uses of wireless telephony, giving communication between airplanes and from mother ships to submarine chasers.

All these accomplishments and uses were made possible by the work of the research laboratories of the Bell System.



**AMERICAN TELEPHONE AND TELEGRAPH COMPANY
AND ASSOCIATED COMPANIES**

One Policy

One System

Universal Service

From The Atlantic Monthly of August 1919. The engineer high on the Eiffel Tower who heard this historic message on October 22nd was none other than Western Electric's Herbert E. Shreeve (1873-1942).

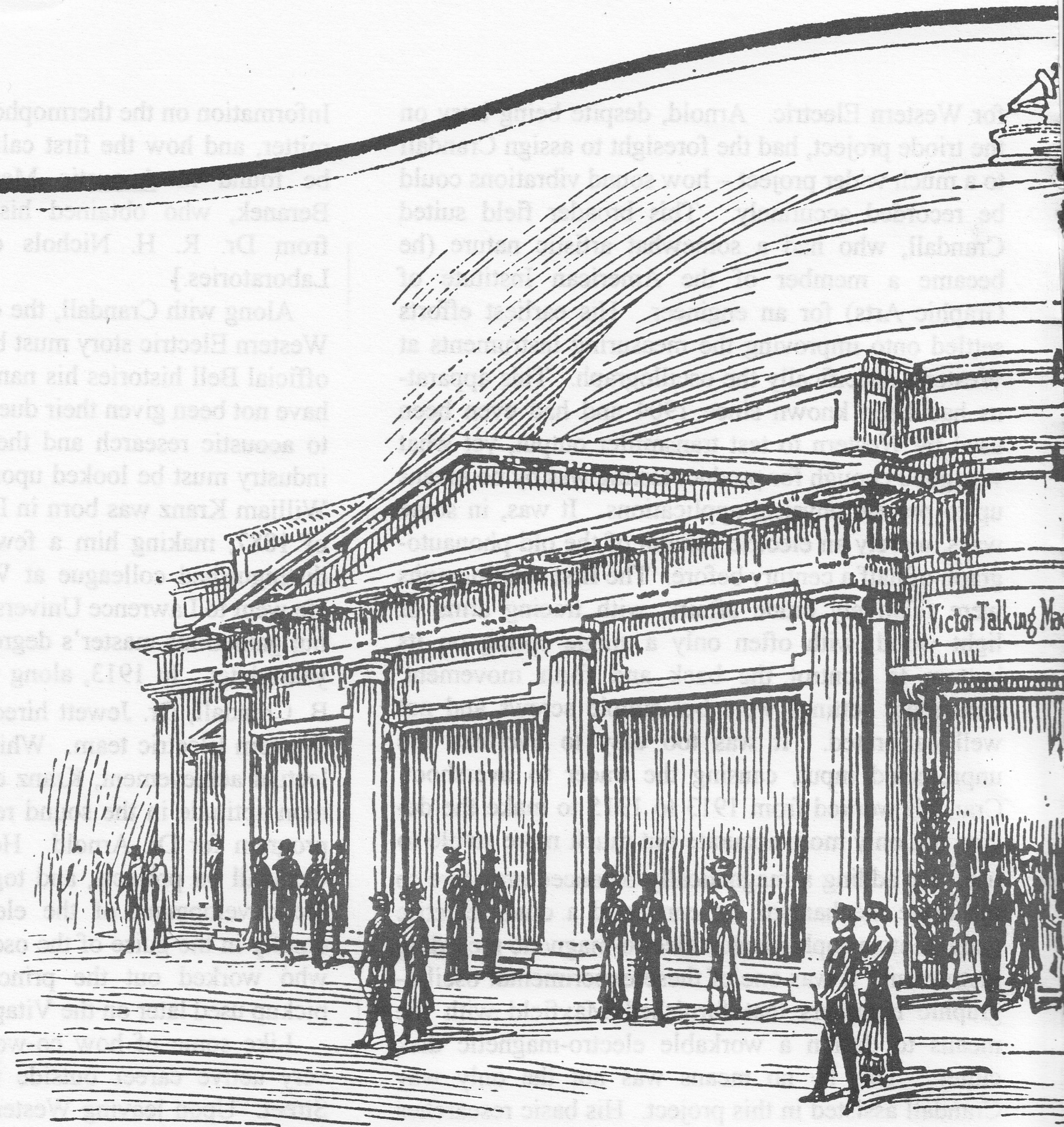
for Western Electric. Arnold, despite being busy on the triode project, had the foresight to assign Crandall to a much wider project – how sound vibrations could be recorded accurately. This broader field suited Crandall, who had a somewhat artistic nature (he became a member of the American Institute of Graphic Arts) for an engineer. His earliest efforts settled onto improving the measuring instruments at Western, specifically the oscillograph. This apparatus had been known since 1904 and had even been used by Western to test transmitter output, yet what was good enough for product testing was by no means up to precise physical applications. It was, in some ways, merely an electric version of the old phonauto-graph of half a century before. The first oscillographs were relatively crude affairs, with tracing arms of light wood, with often only a single spring on its bottom to control the back and forth movement. Sensitivity settings were but simple screws and not well calibrated. It was too easy to overload the unprotected input, causing the tracer to overshoot. Crandall worked from 1913 to 1915 to make the device not only more accurate but much more stable to use. By adding a magnetically balanced armature to the drive mechanism, he converted a crude electric gadget into a sophisticated electro-magnetic recording instrument. It was one of these experimental oscillographic recorders that furnished Maxfield with the means to design a workable electro-magnetic disk cutter. This by no means was not the only way Crandall assisted in this project. His basic researches into sound vibrations proved of great use during the later testing of electrical recording, and by designing a slotted back for the Wente condenser microphone, Crandall helped to make its already good performance even smoother. It should be pointed out that Dr. Crandall worked directly with Dr. Arnold to develop a device known as a thermophone. In simple terms it measured, down to the smallest part, the energy of sound waves in terms of their thermal co-efficients. From its beginnings the thermophone was meant to be used as an instrument for calibrating the Wente condenser transmitter. Several months afterwards Crandall co-wrote the historic paper "The Thermophone as a precision source of sound," published in The Physical Review (Vol. 10, 1917, pp. 22-38). Crandall authored many other important scientific papers and shortly before his untimely death in 1927 saw his great book Sound and Vibrating Systems published and hailed by the learned world. [Note:

Information on the thermophone and condenser transmitter, and how the first calibrated the second, may be found in Acoustic Measurements by Leo L. Beranek, who obtained his information first-hand from Dr. R. H. Nichols of the Bell Telephone Laboratories.]

Along with Crandall, the other unsung hero in the Western Electric story must be F. W. Kranz. Even in official Bell histories his name and accomplishments have not been given their due, though his contribution to acoustic research and the wider talking machine industry must be looked upon as decisive. Frederick William Kranz was born in Dixon, Illinois in the fall of 1887, making him a few months older than his distinguished colleague at Western, J. P. Maxfield. He went to Lawrence University for his A.B., in 1911, but gained his master's degree from Wisconsin eight years later. In 1913, along with Princetonian Irving B. Crandall, Dr. Jewett hired Kranz for his growing Western Electric team. While in this arena of intellectual achievement, Kranz early showed an uncommon aptitude in the sound recording instrumentation program for Dr. Arnold. He was often paired with Crandall on projects, and together they pioneered in the development of the electro-magnetic recorder, chiefly in the guise of the oscillograph. It was Kranz who worked out the principles for the magnetic pickup used later on the Vitaphone setup.

Like some of his co-workers, Dr. Kranz had a very active career outside the walls of 463 West Street. Upon leaving Western Electric at the end of 1920 he became an acoustics consultant for a variety of institutions, later including United Reproducers and the Grigsby-Grunow Corp., makers of the Majestic line of radios and adapters. In 1931 Kranz was chosen to become the chief engineer of the Magnavox Company, a post held for over three years. Later he was made vice-president of Sonotone, the well-known maker of phonograph pickups. Dr. Kranz was a fellow of the Acoustical Society of America, giving many important addresses before that learned group and the American Institute of Electrical Engineers. Many of the most important papers published in the learned journals of these and other societies bore the name of F. W. Kranz as author and co-author. He lived in Pleasantville, New York for many years. He died at age 91 in July 1979, justly remembered as a pioneer in sound research and reproduction.

Although most of these devices came into being because of the research into acoustics inspired by H. (see page 14)



E. R. Worthington

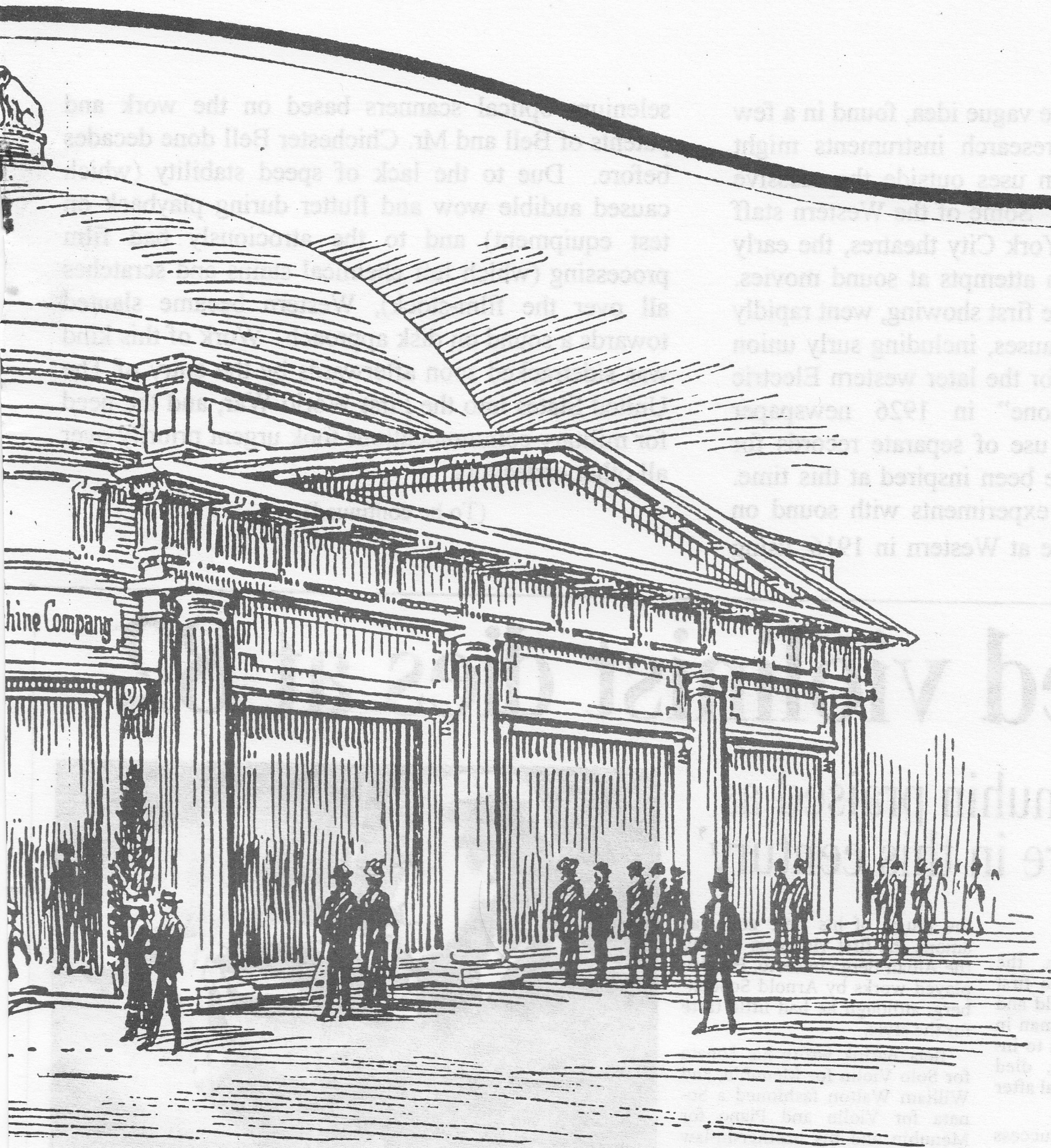
The Victor Exhibit

The Victor Temple of Music in the Palace of Liberal Arts is one of the most attractive exhibits at the Exposition.

On May 7th, just ten weeks after the formal opening of the Exposition, the visitors to the Victor Temple of Music passed the 140,000 mark and the attendance has been as high as 5,000 on one single day.

To all music-lovers the Victor Talking Machine

In contrast to the Columbia pavilion at the 1904 World's Fair, pictured in our "The Victor Temple of Music" from the 1915 Panama-Pacific Exposition in San Francisco. Co-inventor of the telephone service, as mentioned in Tom Rhodes' present article. (The song



at the Panama-Pacific Exposition

Company extends a cordial invitation to visit the Victor Temple of Music, where Mr. E. R. Worthington, with a skilled corps of assistants, will take great pleasure in extending every courtesy in appreciation of your visit.

Opera study classes under talented lecturers; daily concerts; exemplification of educational work and of folk and interpretive dances, are some of the features provided for your entertainment, while Mr. Worthington and his assistants are ready at all times to answer every question pertaining to the Victrola and Victor records.

Our last issue, Ed Novitsky shares this view of Victor's grandiose "Temple of Music." (Incidentally, it was this fair which inaugurated coast-to-coast long distance "Hello, Frisco!" celebrated this achievement.)

D. Arnold, there was some vague idea, found in a few memoranda, that these research instruments might have some future civilian uses outside the massive walls of 463 West Street. Some of the Western staff had seen at a few New York City theatres, the early acoustically made Edison attempts at sound movies. While the results, after the first showing, went rapidly downhill (due to many causes, including surly union projectionists), the idea for the later western Electric system (called "Vitaphone" in 1926 newspaper accounts), including the use of separate records for the soundtrack, may have been inspired at this time. It is known that certain experiments with sound on film recording were made at Western in 1916, using

selenium optical scanners based on the work and patents of Bell and Mr. Chichester Bell done decades before. Due to the lack of speed stability (which caused audible wow and flutter during playback on test equipment) and to the atrociously bad film processing (which left chemical stains and scratches all over the film-stock), Western became slanted towards a sound on disk approach. Work of this kind was sidetracked soon afterwards by the entry of The United States into the First World War, and the need for military communications took urgent priority over all other endeavors.

(To be continued)

Famed violinist dies at 82

Yehudi Menuhin praised as 'major figure in this century'

The Washington Post

Lord Yehudi Menuhin, the world-famous violinist who first dazzled audiences as a child and who later became a statesman in promoting music as a path to international understanding, died March 12 in a Berlin hospital after a heart attack. He was 82.

Menuhin followed up success as a prodigy with a career of unusual range and duration. When he was at his best, his playing was distinguished for its sweetness, purity and spiritual intensity.

"His style of playing, particularly in his early years, was a stunning patrician elegance with a very natural musical line," said fellow violinist Isaac Stern, calling Menuhin "a major figure in this century."

The violinist began in an era that celebrated Fritz Kreisler and Jascha Heifetz and remained an active performer and conductor in the age of Itzhak Perlman and Anne-Sophie Mutter. He was in Berlin this week to appear with the Warsaw Symphony Orchestra.

Citizen of Britain

Menuhin, a citizen of Britain since the 1980s, began recording in 1928 when he was 12 and continuing until a few months before his death — the longest recording career in history.

He was an ardent advocate of

the music of his time and was among the first violinists to play the Alban Berg concerto. He also played works by Arnold Schoenberg, although he had little taste for the style.

Bela Bartok wrote his Sonata for Solo Violin for Menuhin, and William Walton fashioned a Sonata for Violin and Piano for Menuhin and his brother-in-law Louis Kentner. The violinist was an early and eloquent Western advocate of Eastern music and often played with sitarist Ravi Shankar.

Menuhin's first appearance was at the age of 7, with the San Francisco Symphony. Three years later, after a debut at Carnegie Hall, critics began calling him one of the greatest child prodigies since Mozart.

He not only created a sensation but also launched a fad for violin studies across the country.

Praise from Einstein

"Now I know there is a God in heaven!" the famous physicist and amateur violinist Albert Einstein, told the boy after hearing him in 1929.

Menuhin attributed his success to his Russian-born parents, Hebrew teachers who met in Palestine. The Menuhins devoted themselves to nurturing their son's playing. To a lesser degree, they also encouraged their two daughters, Hephzibah and Yaltah,



Associated Press file photo

Violinist Yehudi Menuhin, seen performing in 1944, died of heart failure Friday in a Berlin hospital. Menuhin astonished a San Francisco audience at the age of 7 with a debut violin performance.

pianists who sometimes accompanied their brother in concert.

From the beginning, the young violinist paid little heed to technical training. He played naturally and was able to learn large works with ease at a very early age. "I played the violin without being prepared for violin playing," he later recalled, with some regret.

The Menuhins left San Francisco after Menuhin's fame spread. They lived a nomadic life for a while, moving from hotel to hotel, to accommodate his concert schedule.

He could command a fee for a single performance large enough to support the whole family for more than year, and his parents

took advantage of this to let their children learn about other countries.

Menuhin's natural ability was both his genius and his impediment. "Because the young Menuhin had anticipated so early and so much of what nature had given him, I foresaw that he would have great difficulties," his older colleague Kreisler once said.

In 1935, the young violinist embarked upon a world tour during which he visited 13 countries and 73 cities, and which left him feeling "tired, indifferent and sad."

He retired for a year, resuming his career during World War II to perform more than 500 concerts for American and Allied troops.

Burlington Free Press
March 13, 1999

DEATHS IN THE NEWS

Bidu Sayao: The Brazilian-born soprano whose pure, silvery voice and personal charm made her one of the most beloved opera singers of the 1930s and '40s, died Friday at age 94 in Lincolnville, Maine. Sayao, who had retired to the Maine seacoast at the end of her career in 1958, died from complications of pneumonia after a brief illness at Penobscot Bay Medical Center in Rockport, said Brett Shewey, who was handling funeral arrangements.

Sayao's crystalline voice enchanted conductor Arturo Toscanini, and he trained her for her U.S. debut in Carnegie Hall in 1934. She made a triumphant Metropolitan Opera debut during the 1936-37 season singing the title role of Massenet's "Manon." Her Met career covered 236 performances in 12 roles and lasted until 1952.

— From wire reports

The Boston Globe
March 5, 1999

Eddie Dean, 91

One of the 'singing cowboys'

LOS ANGELES TIMES

Eddie Dean, one of the last singing cowboy stars of the 1940s, died yesterday of heart and lung disease in Thousand Oaks, Calif. He was 91.

Known as the golden-throated cowboy for his exceptionally melodious voice, Mr. Dean appeared in more than 30 B-western movies starting in 1936. In the 1940s he was among the 10 most popular cowboy stars and was the first singing cowboy to do movies in color.

Judging from the critics' comments, it certainly was not Mr. Dean's acting that made his films memorable. They described his performances with terms such as "so-so," "self-conscious" and "indifferent."

What most critics agreed was that Mr. Dean's singing was the best part of his movies. He possessed, in the words of one critic, "one of the better sets of pipes among cowboy Carusos." The late Gene Autry, with whom Mr. Dean appeared in several movies, once said he had the best voice of all the cowboy singers.

"He was a singer first and foremost," said James Nottage, curator at the Autry Museum of Western Heritage, which honored Mr. Dean, Gene Autry, Dale Evans, Monte Hale and other singing cowboys at a three-day festival in 1992.

Mr. Dean also composed about 100 songs, including the country and western classic "One Has My Name, the Other Has My Heart" and "I Dreamed of a Hillbilly Heaven."

The Boston Globe
April 3, 1999

Jesse Stone, 97

Early influence in popular music

ASSOCIATED PRESS

ALTAMONTE SPRINGS, Fla. — Jesse Stone, a major influence on 20th century music who wrote "Shake, Rattle and Roll" and helped develop many of Atlantic Records' biggest hits, has died. He was 97.

Mr. Stone died Thursday after a long illness.

As a writer, producer and arranger at Atlantic, Mr. Stone worked with artists such as Ray Charles, Big Joe Turner, the Drifters, and the Clovers. Among his other famous songs were "Idaho" and "Money Honey."

In 1974, Atlantic Records President Ahmet Ertegun said: "Jesse Stone did more to develop the basic rock 'n' roll sound than anybody else."

The grandson of Tennessee slaves, Mr. Stone had a career that spanned the musical spectrum: minstrels, folk songs, dance orchestras, rhythm and blues, rock 'n' roll and jazz.

Mr. Stone always was on the cutting edge, never quite achieving fame but highly respected within the core of the profession.

He helped build Atlantic Records into a top rhythm-and-blues label in the late 1940s and early 1950s, signing such stars as Ruth Brown.

It was Mr. Stone and Bill Haley, who had a Top 10 hit in 1954 with Stone's "Shake, Rattle and Roll."

Earlier, Mr. Stone's jazz tune "Idaho" helped make Guy Lombardo rich and famous, selling 3 million copies in the mid-1940s. Benny Goodman and Jimmy Dorsey also had a hit with it.

Born in Atchison, Kan., oMr. Stone, who also wrote under the name Charles Calhoun, started performing at age 5, touring with his family's minstrel show. In the 1920s, he led a jazz group that included future saxophone legend Coleman Hawkins.

In 1936, Duke Ellington helped him get a booking at the Cotton Club in New York. He also worked at the Apollo Theater, composing and arranging songs as well as writing jokes and sketches.

He was inducted into the Rhythm 'n' Blues Hall of Fame in 1992.

(see over)

Victor Records ORTHOPHONIC RECORDING

July

VE

1928

1329
10-in.
list price
\$1.50

La Capricciosa (Franz Ries)

Allegro (J. H. Fiocco) Master Yehudi Menuhin

With this amazing record, Yehudi Menuhin, a little, roly-poly boy twelve years old, makes his Victor debut. The record is living proof that Yehudi Menuhin, child that he is, may take a place of importance among mature artists. If there is anything youthful about his playing, it is his superb joyousness, vitality and verve. Both his selections exhibit these engaging qualities... yet there is a somber warmth in the G string tones, a hint of deeper emotion—and always mature confidence, sureness, infallibility. A brilliant record... a delightful and—who knows?—perhaps a historic record. Certainly it should be in your collection.



Yehudi Menuhin's first recording, issued July, 1928. It surely **must** be considered a "historic record," as Victor predicted!

Red Norvo, 91, Effervescent Jazzman, Dies

By PETER WATROUS

Red Norvo, one of jazz's early vibraphonists and a gifted band leader whose groups greatly influenced American music and backed singers like Mildred Bailey, Billie Holiday and Frank Sinatra, died on Tuesday at a convalescent home in Santa Monica, Calif. He was 91.

Mr. Norvo helped introduce the xylophone and later the vibraphone as legitimate jazz instruments. But playing an unusual instrument was not what earned him, early in his career, spots in some of jazz's most important orchestras, including the groups of Paul Whiteman, Benny Goodman, Charlie Barnet and Woody Herman. Mr. Norvo was a genuine improviser, effervescent, intelligent and searching, and even his early solos reflect a literate sensibility, embracing both the classical and jazz worlds.

A typical Norvo solo dives and turns, nudging the harmony with as-tringent dissonances. He had a way of keeping his lines happy; they bounce with a firm sense of swing. But underneath was an element of darkness, an exploratory urge that led his improvisations into corners where most improvisers would not venture. On "Blues à la Red," from 1944, Mr. Norvo's solo uses odd figures and a streamlined swing that mix perfectly: riffs and lines and melodies all combining for a powerful statement.

Mr. Norvo, who was born Kenneth Norville in Beardstown, Ill., sold his pet pony to help pay for his first instrument, a marimba. He started his career in Chicago with a band called the Collegians in 1925. In the late 1920's he joined an all-marimba band, playing the vaudeville circuit. (He also tap-danced and played xylophone.)

He changed his name after a vaudeville announcer pronounced it incorrectly, and it appeared that way in Variety. "It stuck," he told an

interviewer, "so I kept it."

When he graduated to the Whiteman orchestra, he met Bailey, a singer in the band, whom he married in 1930; they were nicknamed "Mr. and Mrs. Swing" and remained together for 12 years. They were still friends when Bailey died in 1951.

The couple formed their own band in 1936, using the innovative arranger Eddie Sauter to write much of their material. They had several hits, including "Rockin' Chair," "Please

A vibraphonist and band leader with a firm sense of swing.

Be Kind" and "Says My Heart," and their work was well respected by musicians, who found the arrangements sophisticated.

But Mr. Norvo was not simply producing pop music with his wife. He was one of the earliest musicians to take refuge in the jazz clubs that once lined West 52d Street in Manhattan, and he worked there at the Famous Door with a group that had neither a drummer nor a piano. The group and the music it played helped set Mr. Norvo's reputation as a leader with experimental ideas, a jazz musician who like to play quietly. The music quickly came to be called chamber jazz.

In 1933, the year he first recorded under his own name, he produced some of the most unusual recorded jazz of the time, including Bix Beiderbecke's "In a Mist" and his own "Dance of the Octopus," using a group that included Benny Goodman on bass clarinet and himself on marimba, accompanied by guitar and bass. And he was cultivating his own

bands, with a fine ear for talent. In 1934 he led a group with Artie Shaw and Charlie Barnet as sidemen, and recorded with Chu Berry, Teddy Wilson, Bunny Berigan and Gene Krupa.

Mr. Norvo offered a singing spot to Frank Sinatra in 1939, but he turned them down as he had just signed a contract with Harry James. Sinatra and Mr. Norvo remained friends, however, and the Norvo band influenced Sinatra's music.

In 1944 Mr. Norvo joined Benny Goodman's sextet, and a year later played with the First Herd of Woody Herman, an orchestra that was proud of its harmonic innovations. It was in the middle 1940's that Mr. Norvo moved from the xylophone, an acoustic instrument, to the vibraphone, an electrified version. At that point he undertook an innovative recording project, merging some of the best of the swing-era improvisers with the leaders of the be-bop movement, Charlie Parker and Dizzy Gillespie.

The session, recorded for Comet records, included Mr. Norvo, Gillespie on trumpet, Charlie Parker and Flip Phillips on saxophones, Teddy Wilson on piano, Slam Stewart on bass and Specs Powell and J.C. Heard on drums. They recorded "Hallelujah," "Get Happy," "Slam Slam Blues" and "Congo Blues," and the result was some of the most highly regarded music of the era.

Two years later, having moved to California from New York with his second wife, Eve Rogers, Mr. Norvo decided to form a small group. (It was hard for him to find good musicians in California at that time.) He brought together Tal Farlow on guitar and Red Kelly on bass. The bassist Charles Mingus, who had worked with Mr. Norvo when his group backed Billie Holiday, replaced Mr. Kelly in 1950, and the three produced extremely light but swinging and complicated music that was almost

shocking in its virtuosity, full of rapid tempo changes and sophisticated harmonies.

The band, regarded as one of the finest small groups in jazz history, recorded for two years; later trios included the guitarist Jimmy Raney and the bassist Red Mitchell.

Mr. Norvo kept busy even during jazz's slack periods. He worked with Goodman in 1959 and 1961, and recorded regularly in the late 1950's, for Contemporary, Victory and Fantasy Records. And in 1957 he resumed his relationship with Sinatra, who would come to Mr. Norvo's shows at the Desert Inn in Palm Springs, Calif.

A year later Sinatra hired Mr. Norvo for the Sands in Las Vegas. It was there that Sinatra came up with the idea of touring with Mr. Norvo, which they did in 1959. The association lasted nearly 20 years. Mr. Sinatra liked to have Mr. Norvo and his band at the Sands, so that he could perform with a jazz group whenever he wanted. Mr. Norvo often toured under the auspices of the jazz entrepreneur George Wein as well.

In the 1960's Mr. Norvo suffered partial hearing loss after an infection and compounded the problem at a shooting range when a gun discharged next to his ear. Surgery and a hearing aid helped him regain some hearing. Then in the 1970's, after his wife and one of their two sons died within a short time, he stopped playing for two years.

He is survived by a daughter, Portia Corlin of Santa Monica; a son, Mark, and one grandchild.

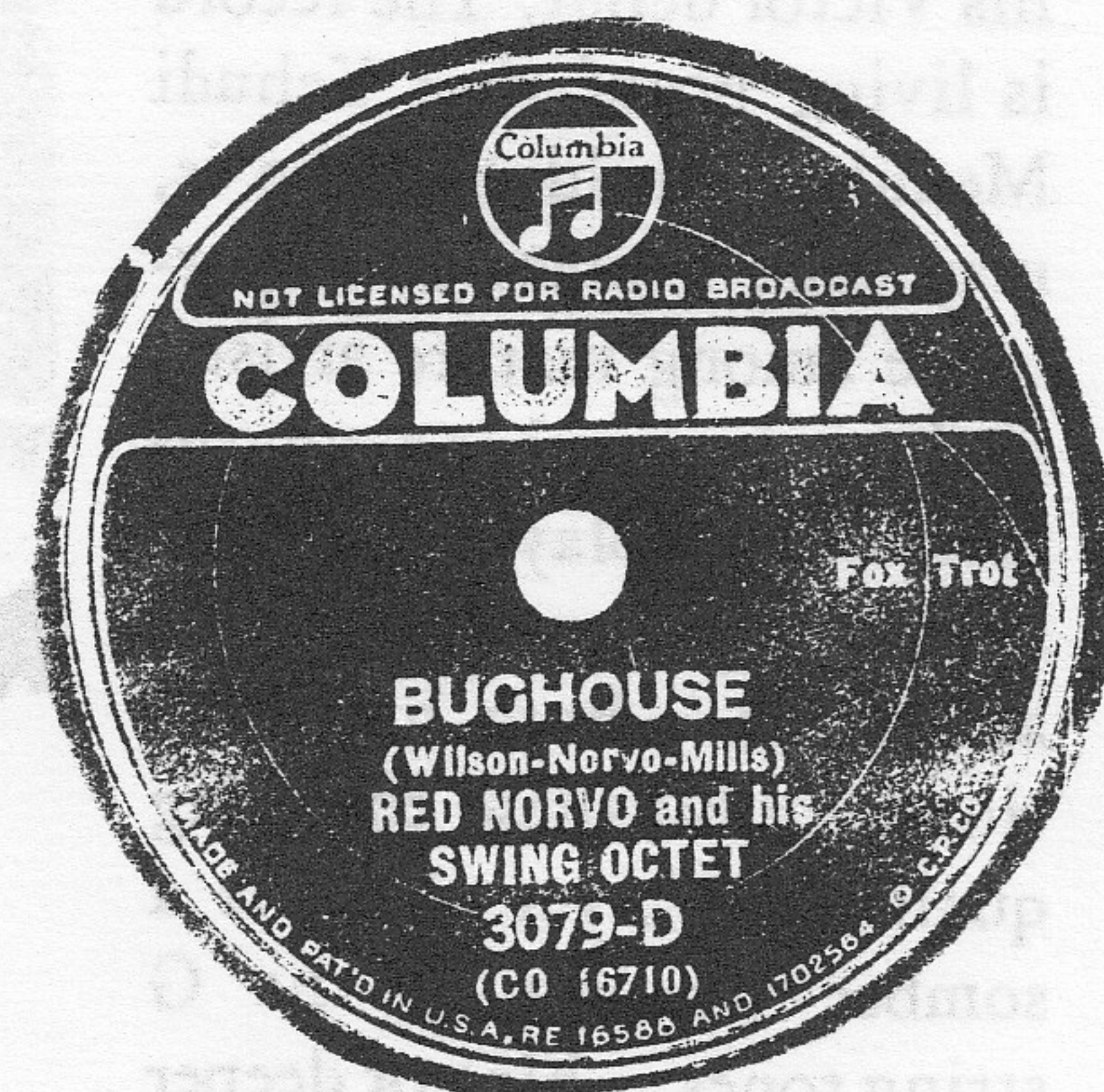
He began to work again at a club in Las Vegas and for the rest of his career kept recording and touring regularly. A stroke in the mid-1980's, forced him into retirement, but even in his last years his performances were often marvels of intelligent swinging.

Red Norvo first appeared on record under his own name in 1933 on Brunswick #6562. The Columbia disc at the right was recorded on January 25, 1935, during a period which saw an increased decline in production of "popular" Columbia records.

Jesse Stone recorded as early as 1927, accompanying George E. Lee on the legendary Meritt label of Kansas City. He also led an orchestra which recorded for Okeh in St. Louis that same year.

Frank A. Pedi, who sang briefly with Guy Lombardo and also recorded under the name **Frank Petty**, died in November at the age of 82. Famed bass player **Bob Haggart**, who recorded with the Bob Croddy band in the 1930s, passed away in December; he was 84.

(Thanks to Richard Gesner, Ken Sweeney, and Gavin McDonough.)





IN REVIEW

The Orchestra on Record, 1896-1926: An Encyclopedia of Orchestral Recordings Made by the Acoustical Process, by Claude Graveley Arnold, C.S.B.

"The orchestra came last," as Roland Gelatt put it in The Fabulous Phonograph. Long after recordings of the greatest singers and instrumental soloists were common, technology and commercial considerations limited the recording of symphony orchestras. And while the old vocal records continued to be prized by connoisseurs, acoustical orchestral recordings were soon forgotten; such was the superiority of the electrical process in capturing the sound of a full orchestra. But there is much in this early period that is worth remembering, and at last we have a superb discography that covers the subject thoroughly.

The story told by Gelatt, and by Claude Arnold himself in the article he wrote for Guy Marco's Encyclopedia of Recorded Sound in the United States, is filled out here in full detail. In the early days, most records were of short works that would fit (or were cut to fit) on one or two sides, usually performed by house orchestras under anonymous or little-known conductors. The era of celebrity conductors on record began in earnest in 1913, when Artur Nikisch recorded Beethoven's Fifth Symphony with the Berlin Philharmonic. Orchestral recording, especially of the big works such as complete symphonies, was centered in Europe, and particularly in Germany. The record-buyer of 1925 could choose two competing cycles of the Beethoven symphonies, both of German origin. Today Deutsche Grammophon calls itself "the label of conductors," but its predecessor in the acoustical period could boast not only Nikisch, but Oskar Fried, Otto Klemperer, Richard Strauss, Hans Pfitzner, Bruno Walter, Hermann Abendroth, Fritz Busch, Alfred Hertz and Leo Blech, not to mention the company's own music director, Bruno Seidler-Winkler. Parlophon/Odeon were also quite active, as were Columbia

and HMV in England. Acoustical orchestral recording turns out to be a richer field of activity than one might have suspected.

Arnold's listings are arranged by composer and composition; composers' dates are supplied, and musical works are specified with precision. Recordings of a given work are listed chronologically, with numbers of all known issues. The high percentage of entries for which matrix and take numbers are listed attests to the thoroughness of Arnold's research, but some have proven elusive. Recording dates are given where known; their absence from most Polydor listings is regrettable, but apparently the ledgers have not survived. The year (and month, where known) of issue is also listed. Arnold mentions any LP or CD reissues in footnotes. Conductors, orchestras, and soloists are listed in appendices, cross-referenced to page numbers in the main body of the discography.

The scope of this discography has been limited to keep the book to a manageable size. Most recordings by bands (without a string section) are not listed, including band arrangements of orchestral works. Vocal recordings are not here, even those led by well-known conductors. Most orchestral arrangements of vocal numbers from operettas and musical comedies are omitted. The line between classical and popular music has been drawn wisely; plenty of "light classics" such as the waltzes of the Strauss family are included.

Where I have checked the details Arnold provides against the records in my own collection, I have found no errors and few omissions. I have used the discography enough to become accustomed to its organization, but I found it a bit confusing at first. The layout of entries could be improved, and typefaces could be varied to enhance readability. But these are minor reservations when the work as a whole is of such excellence.

I know of no other book that could be called a predecessor or a competitor to this one, and I doubt that one will appear anytime soon. Claude Arnold has given us a much-needed reference, and he has done his work very well indeed.

The Orchestra on Record, 1896-1926 (ISBN 0-313-30099-2), 728 pages, is published by Greenwood Press, Westport, CT. <<http://www.greenwood.com>>

-- Russell W. Miller

Corrections, Additions, and Assorted Thoughts on Ray Wile's "Cylindrical Diamond Discs," Issue #100.

In issue #100 we ran Ray Wile's listing of several hundred dubbed Edison Blue Amberol cylinders which were made from unissued Diamond Disc masters, and we invited corrections and additions. We weren't prepared for the dozens which we received! In fairness to Mr. Wile, his compilation was taken directly from Edison factory notes, and it is these data which were sometimes lacking in details (remember that the Edison company made thousands upon thousands of Diamond Disc and Blue Amberol matrices). New subscribers may still obtain issue #100 (see p. 2). We continue to solicit additions and corrections to this important study, and it is possible at some future date that we may reissue this listing as a separate booklet.

Roger Beasant's List

Key: * indicates incomplete information.

@ indicates incomplete and possibly incorrect information

Add:

<u>Cyl. #</u>	<u>cyl. mx.</u>	<u>DD mx.</u>	
2488	12226		By the Setting of the Sun - Walter Van Brunt [direct? Dubbed?]
*2518			Amazonia - National Promenade Band [direct? dubbed?]
*2586			The Little House Upon the Hill - Manuel Romain & Chorus
*2590			After Sunset - Edison Concert Band
*2614			Friend - Frederick J. Wheeler [same as British #23374]
2692			Delete (issued as D.D. 80243, same mx.)
2685	3929		Ua Like No Alike and Medley of Hawaiian Hulas - Frank Ferera
2691			[see 2812]
2703			Delete (issued as DD 50272, same mx.)
2706	3993		Spring's Awakening - Mary Carson (also see British #23398)
2723	3952		The Relic Hunters - Billy Golden & James Marlowe
2812	3951		Henry and Hank at the Levee - Kaufman Brothers [previous title: "Hicky Hoy"?] [From unissued D.D. 50280]
*2820			Help the Other Fellow - Knickerbocker Quartet
*2822			Cheery O! - Frederick J. Wheeler & Chorus
2859			Delete (issued as D.D. 50366, same mx.)
2879			Delete (issued as D.D. 50366, same mx.)
3089	5083		Here Comes the Groom--Betty - Billy Murray
@3093			The Chicken Walk - Edward Meeker [Unissued? --ed.]
3106			Delete (issued as D.D. 50617, same mx.)
3112			Delete (issued as D.D. 50421, same mx.)
3121			Delete (issued as D.D. 50421, same mx.)
3135	5253		Don't Slam That Door - Ada Jones & Billy Murray [from unissued D.D. 50981]
3157	4874		The Story of Chicken Little - Edna Bailey [from unissued D.D. 50432]
@3285			Akahi Hoi - Ford Hawaiians [live or dubbed?]
*3409			Love, Here is My Heart - Herbert Soman & John F. Burckhardt
3418	5852		That's It - Frisco Jass Band [From D.D. 50950 - unissued?]
*3437			Someone is Waiting for You - Shannon Quartet
*3469			The Magic of Your Eyes - George Wilton Ballard
3515			Delete (issued as D.D. 50562, same mx.)
3524			Three Wonderful Letters from Home - George Wilton Ballard
*3529			Chimes of Normandy - Helen Clark

- *3547 Ben Bolt and In the Gloamin' - Bohumir Kryl
3566 [This was erroneously listed as #3556]
- *3629 Barcarolle—Tales of Hoffmann - Creatore and His Band
3630 Initially listed as by Harvey Hindermeyer, but eventually changed to his pseudonym Harvey Wilson.
- 3724 Kuu Ipo I Ka Hee Pue One Medley—Fox Trot - Samuel Siegel & Marie Caveny
@3754 Alderman Doolin's Campaign Speech - Steve Porter [Old live mould from BA 2037 or new dubbed mould?]
- *3803 Chan Chan Gavotte - Edison Concert Band
3842 Delete (issued as D.D. 50594, same mx.)
*3879 Rose of My Heart - Will A. Rhodes, Jr.
3967 Delete (issued as D.D. 50634, same mx.)
3986 Delete (issued as D.D. 80077, later issue, same mx.)
4089 Delete (issued as D.D. 51000, same mx.)
*4180 Napoli - Imperial Marimba Band [While the title "Napoli" does not appear in the Diamond Disc list, this is almost certainly from D.D. mx. 7477, titled "Rivoli" on D.D. 50764; both compositions are credited to Lew Cobey, and both supplements note the introduction of "O Sole Mio" -ed.]
- *4526 My Sweet Egyptian Rose - Vernon Dalhart
4550 2933 Forget-Me-Not - American Symphony Orchestra
4568 2696 Ida - Reed Orchestra
@4583 Serenade—Spanish Dance - Edison Concert Band
*4616 Maid from the Highlands - American Symphony Orchestra
4675 8542 Only to See Her Face Again - Venetian Instrumental Quartet
@4780 Largo from "New World" Symphony - American Symphony Orchestra [probably from D.D. mx. 8998 on D.D. 80770 by the American Concert Orchestra. -ed.]
- 4790 Delete (issued as D.D. 51348, same mx.)
*5113 10729 I Need You, Jesus - Homer Rodeheaver and Chorus [from unissued D.D. 51683]
*5336 Virginia Reel - Henry Ford's Old-Time Dance Orchestra
*5340 Golden Slipper Medley - Henry Ford's Old-Time Dance Orchestra
*5617 Beautiful Beckoning Hands - Posey Rorer and The North Carolina Ramblers
*5682 Give Your Baby Lots of Lovin' - Jack Dalton & The Seven Blue Babies
@5704 Button Up Your Overcoat - B. A. Rolfe's Palais d'Or Orchestra [Both Diamond Disc and Needle Type issues were by the Golden Gate Orchestra. Therefore, the cylinder is either miscredited or an undocumented alternate recording by Rolfe's Orchestra. -ed.]
- 23374 Friend - Frederick J. Wheeler
23398 3993 Spring's Awakening - Mary Carson
29058 [This number was erroneously listed as 29056]

Ron Dethlefson's List:

- 1651 - Lincoln's Speech - This was issued as a direct Blue Amberol as part of the Civics Education Series in 1913. I doubt that the direct moulds were worn out by the time of the dubbing in early 1915. The dubbing was evidently made, but it may never have been used.
- 2744 - delete (issued as D.D. 80095 with mx. 952 and later 4061)
- 2808 - Morning, Noon and Night in Vienna. Issued on Diamond Disc as 80052 by String Orchestra, mx. 1262. This is equivalent to mx. 4272.
- 3095 - delete (issued as D.D. 50412, same mx.)

- 4158 - delete (issued as D.D. 50514, same mx.)
- 4173 - delete (issued as D.D. 50744, same mx.)
- 4274 - Mello 'Cello. It's interesting to note that there was a Diamond Disc recording of this selection, but that version was by Max Fells' Della Robbia Orchestra on D.D. 50794, mx. 7945.
- 4277 - delete (issued as D.D. 50876, same mx.)

Arthur S. Pare's List:

Delete all of the following:

- 2563 - issued as D.D. 80217, same mx.; disc was cut as of Dec. 6, 1916
 - 2646 - issued as D.D. 50281, same mx.
 - 2649 - issued as D.D. 80247, same mx.
 - 2715 - issued as D.D. 50066, later issues, same mx.
 - 2744 - issued as D.D. 80095, later issues, same mx.
 - 2808 - issued as D.D. 80080, later issues, same mx.
 - 3011 - issued as D.D. 50392, same mx.
 - 3020 - issued as D.D. 80341, same mx.
 - 3095 - same note as Dethlefson's
 - 3178 - issued as D.D. 80397, same mx.
 - 3376 - issued as D.D. 80488, same mx.
 - 3516 - issued as D.D. 50949, same mx.
 - 3833 - issued as D.D. 80531, same mx.
 - 4158 - same note as Dethlefson's
 - 4173 - same note as Dethlefson's
 - 4277 - same note as Dethlefson's
 - 5227 - issued as D.D. 51719, same mx.
- 2939 - Blue Amberol was issued (August 1916). It was by Lester Bernard (not Al Bernard) and is a recitation.

Don Peak adds:

- 3967 - delete; this was issued as D.D. 50634, same mx.

Editor contributes:

- 4017 - delete. This was issued as D.D. 50663, same mx., but under "Rachel Grant's" real name: Gladys Rice!
- 4057 - This is another oddity! There was a Diamond Disc of this title by Helen Davis, but with Lewis James instead of Charles Hart (DD. 80631, mx. 7780)

Thanks also to Jim Hedges, whose list of three "deletes" duplicated Roger's and Ron's.

wanted

WANTED; VINTAGE RECORD SLEEVES: American RPM era company sleeves from 1894 mark to 1960 Chicago, with a continuous to mid-1960s South Africa, India, Uruguay, etc. Terry Tullos Wayland c/o Observation Associates, 17710 Ranch Rd., Aberley, Texas 78676-6008. (104)

WANTED: 78 record of "Hunky Dory" by Vessman. Victor Monarch #3363. May also list on other number and/or label. Jeff Ward, 5511 W. Lk. Samm. Pky. NE, Redmond, WA 98052; (425) 869-8017; email: diron@foxinternet.net (102)

WANTED: Gun-metal finish gear cover for Berola I-A. Martin Bryan, 37 Caledonia Street, St. Johnsbury, VT 05819. (102) 748-9264. ()

WANTED: COLLECTOR OF MILITARY (CONCERT) AND wind and percussion solos, duets, etc. is in last stages of compiling Victor Company catalogues. Needs many records. Send lists with prices or ask for lists of wants. Need 7", 8", 10", 4" sizes. Particularly need "Consolidated Talking Machine," pre-dog "Eldridge Johnson", Monarch, DeLuxe types and educational. Also seek other labels: American, 7" Berliner (all performers), Columbia, Brunswick, Busy Bee, Climax, Cort, & R, Diamond, Edison, Emerson, Federal, Bennett, Lakeside, Leeds, Little Wonder, Lyric, Marconi, Oxford, Pathé, Puritan, Tex, Silvertone, Star, Zonophone, etc. Cylinders too. Write: Frederick P. Williams, 8313 Shawnee Street, Philadelphia, PA 19118. (100)

WANTED: Edison Diamond Discs 50348, 50404, 50415, 80232. Also cylinder boxes and tops. Must be in excellent condition. Describe, price. Gregory R. Reed, 141 South Broad Street, Nazareth, PA 18064. (103)

PICTURE - DISC - RECORDS (Pic on entire surface!) Buy--Sell all sizes, categories, unusual and curio. POPP, Schillerstr. 9, 65549 - Limberg, Germany. Tel & Fax: (+49) 6431 41717. (104)

Wanted: Victrola Tungs Tone Needles (full tone) in red and gold tins. Alan Linderman, 18415 Lancashire Rd., Detroit, Michigan 48223. (313) 835-0457. (103)

Opera original parts wanted: Horn, gear cover over governor, automatic stop and screw, Triumph lid handle. Howard Klein, 2980 Forest Lake, Acampo, Calif. 95220. (102)

WANTED: The white label Edison Diamond Disc recording #51442 of "Take Me." The flip side has "Underneath a Sunny Sky." Also desire the 78 rpm recording of "Brazil" by Xavier Cugat on Columbia red label #36651. Thanks. Dave Springer, 404 S. 3rd Avenue, Wausau, WI 54401. Ph. (715) 355-0271 (eves--collect o.k.) (103)

DICK SPOTTSWOOD likes pre-war ethnic 78s-Slavic, S. American, Irish, Cuban, West Indian, Greek, Turkish, Albanian, Bulgarian & more. Exotics preferred. To contact Dick: 10511 De Neane Rd., Silver Spring, MD 20903. (107)

Another request from Grandmon Brenda. I would like to have two 78-Albums that will hold twelve ten-inch records. Brown albums please. I am still seeking Victor paper needle packs. Also looking for twelve-inch records: Comedy, music, singing - Please no long hair or opera. Thank you. Brenda Olsen, P.O. Box 1687, DeLeon Springs, Florida 32130-1687. (105)

wanted

WANTED: 1890's Berliner or cylinder recordings on cassette. Will pay generous fee for any of these 1890's vocal recordings on cassette: "After the Ball"; "Break the News to Mother"; "Curse of the Dreamer"; "Down in Poverty Row"; "Hello! Ma Baby"; "In the Baggage Coach Ahead"; "Just Tell Them That You Saw Me"; "The Moth and the Flame"; "My Mother was a Lady"; "My Old New Hampshire Home"; "My Wild Irish Rose"; "On the Banks of the Wabash"; "A Picture No Artist Can Paint"; "She May Have Seen Better Days"; "The Sunshine of Paradise Alley"; "Sweet Rosie O'Grady"; "Take Back Your Gold." Also "Mary's a Grand Old Name" from 1905-06. Tom Mootz, 1767 Glenview Ave., St. Paul, MN 55112. (103)

WANTED: Victor Orthophonic Parts: 1. Gold or nickel plated brass ortho reproducer. 2. Non-Repairable Ortho reproducers. 3. Ortho reproducer parts ie: stylus bar, diaphragms, etc. 4. Gold or nickel plated parts for a Victor Orthophonic 8-12: Tone Arm (with or without bracket), needle cup, needle tin holder, turntable, speed control. I think the tonearm and other parts from the credenza will match the 8-12. I can send pictures or dimensions of the tonearm if needed. ALSO WANTED: old 78 jackets in bulk. Contact: Paul Sala, 161 Laurel Hill Dr., S. Burlington, VT 05403. (802) 660-4314. email: psala@btv.ibm.com (102)

WANTED: Any photographs and written material, original or copies, for the Pathephone Model #50 tabletop disc phonograph. Also, book- Edison, Inventing the Century by Neil Baldwin. TCM, P.O. Box 363, Rotterdam Junction, NY 12150-0363. (102)

WANTED: Complete winding mechanism for Victor Table Top Model 1-1. Will buy entire motor or whole parts machine if necessary. Set of mahogany speaker doors for early Victor IX tabletop. Cabinet is 15" wide x 10" high (not including lid). Write: Gene Emering, 4 Douma Ct., Newton, NJ 07860, or call: (973) 300-1595. (102)

Victor 10" storage albums wanted. Acoustic era only, in good condition. Also want Brunswick 6725, "The Old Spinning Wheel," by Victor Young's Orchestra. Barry L. House, 167 Carroll St., Springfield, MA 01108-2781. (102)

Auctions

AUCTION: 200 old 78 R.P.M. records by the Original Carter Family. Also 55 LP records by the Carter Family - Most all mint/sealed. Many rare. Harvey H. Fink, Box 156, Johnson Creek, Wisconsin 53038. (1-920-699-6979) (102)

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for sale

FOR SALE: Old "W.L.S. National Barn Dance" Family Albums 1930-1933 - \$34.50 each - Years 1934-1957 - \$28.75 each. All very good to ex. condition. Postage \$5.00. Very Limited. Rare. No checks. Cash or Money Orders only. These won't last long. Send \$1.00 + S.A.S.E. for other W.L.S. Barn Dance material. Will trade for old 78 records by the Carter Family. H. Fink, Box 156, Johnson Creek, Wisconsin 53038. 920-699-6979. (102)

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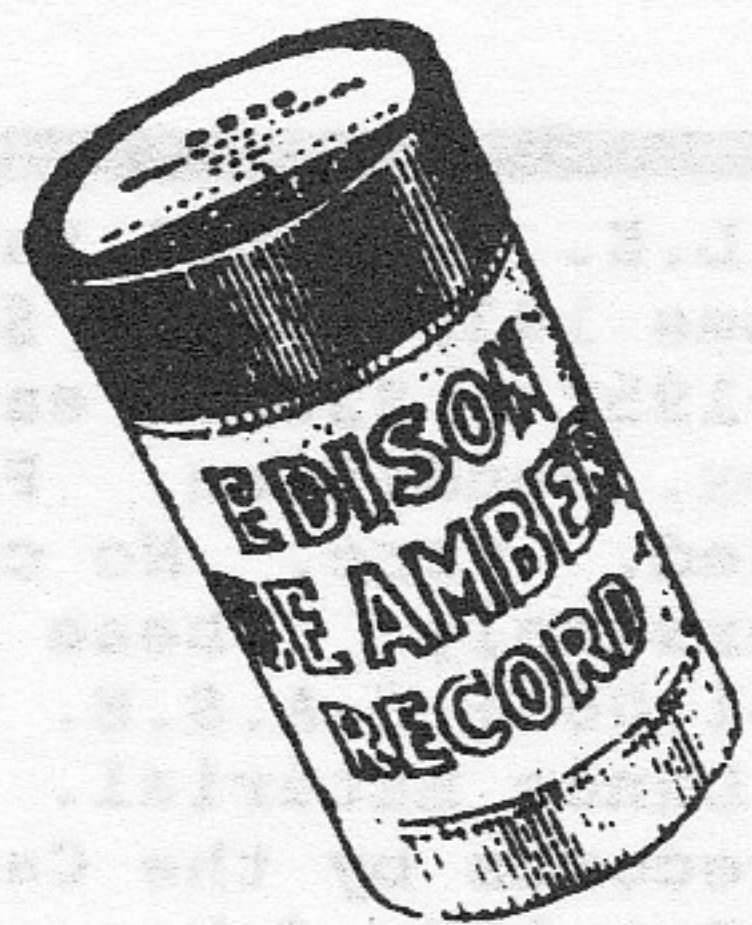
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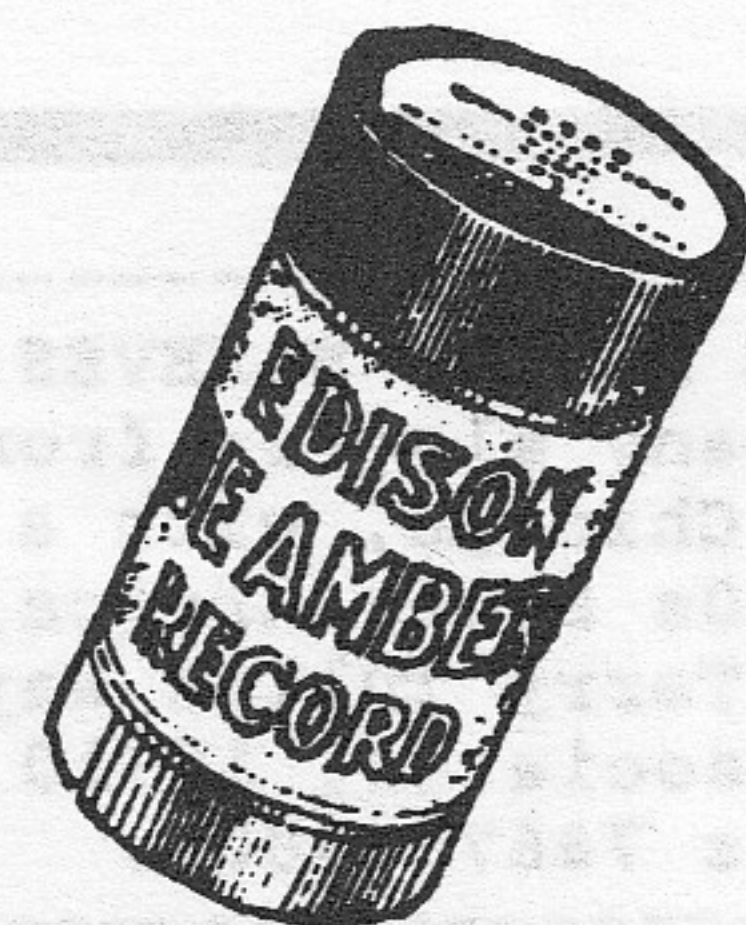
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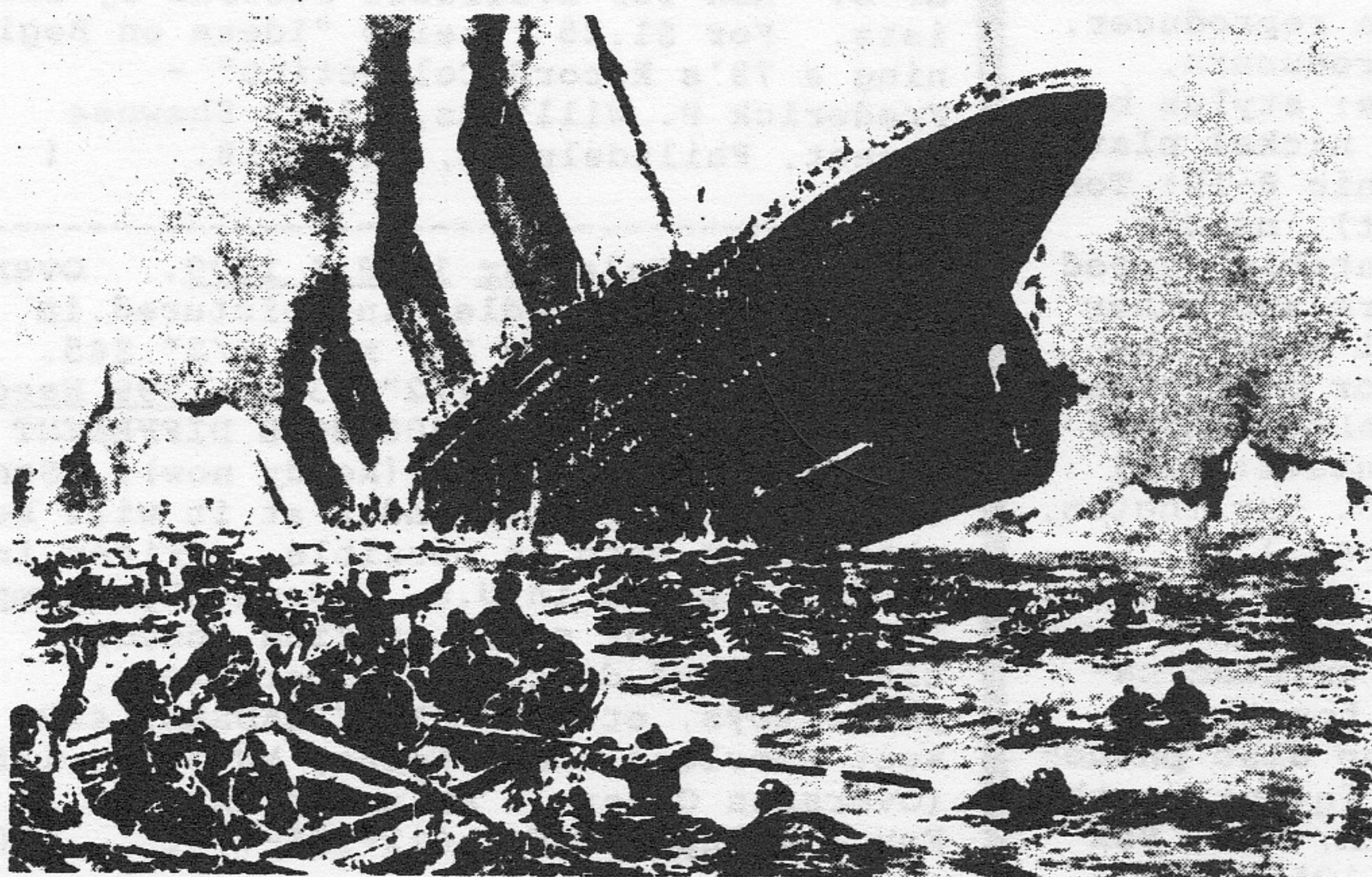
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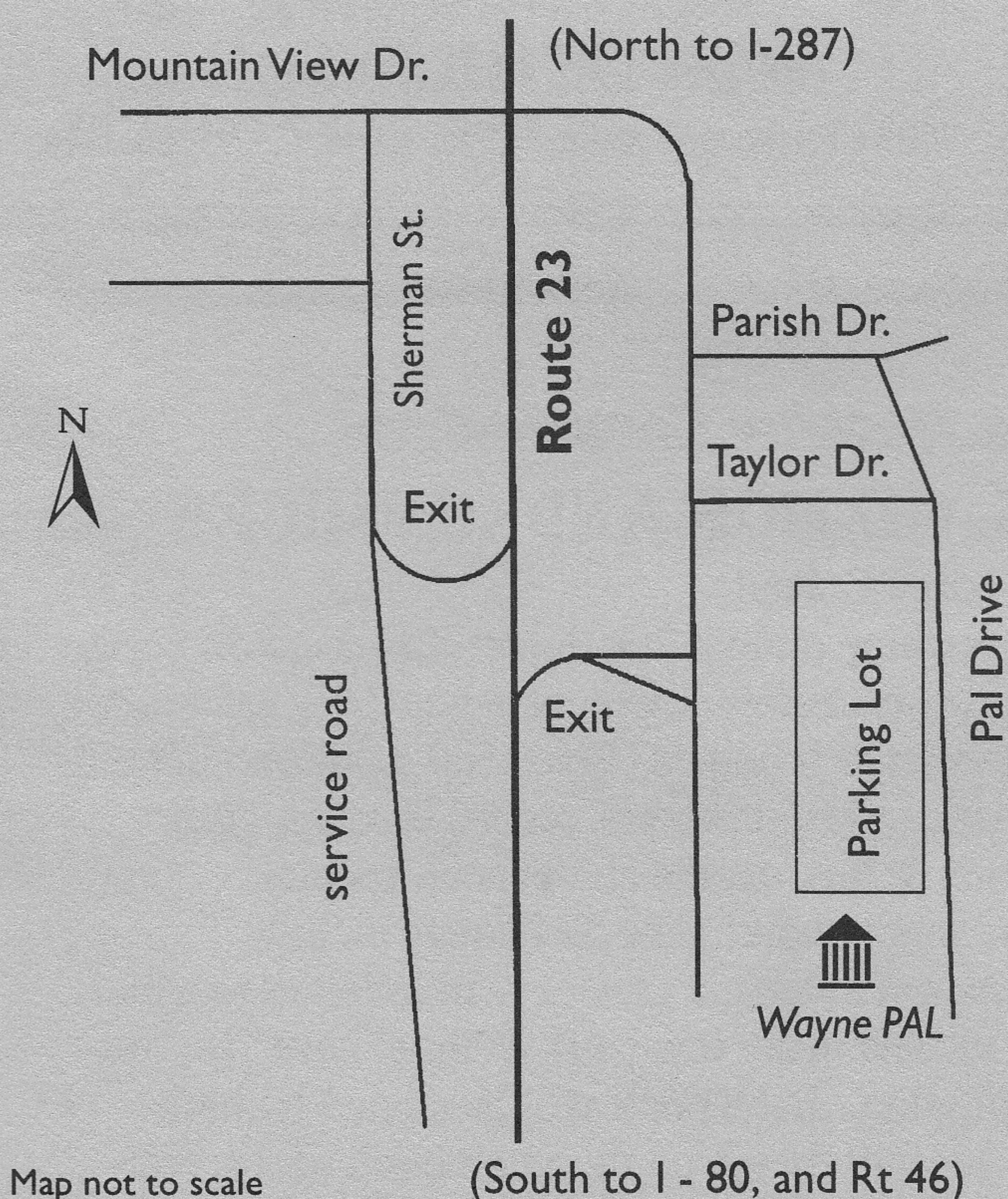
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Local Map to the Wayne P.A.L..



Directions to the Wayne P.A.L.

From the East

Take Interstate 80 West to Exit 53 – Route 23 North (Butler). Proceed on Route 23 North appx. 1 mile. Exit at Route 202 South - Alt. 511 - Boonton/Lincoln Park. Turn left off exit ramp. Go appx. 200-300 feet, turn right on Taylor Rd. (Masonic Lodge and First Union Bank on corners). Continue one block on Taylor Rd. Turn right on PAL Dr. The PAL Parking lot and building will be immediately visible.

From North

Take Route 23 South to Exit at Route 202 - Alt 511 - Boonton Lincoln Park (Note: this exit is appx. 1000 ft. past the Alps Rd. exit). At the base of the exit is a stop sign (Sherman St.). Go one block to the traffic light. This is Route 202 (Mountain View Dr.) Make a right onto Mountain View, go under Rt. 23. Turn left at Parish Dr. (Ramapo Bank at near corner) and go appx. 200 ft. to a "Y" in the road. Bear to the right (this is PAL Dr.) and follow until you see the PAL lot and building. (Note: I-287 now intersects Rt. 23 north of Wayne. Those of you coming from upstate NY and New England may want to take the NY Thruway to Rt. 23. Very direct.)

From South

Take the Garden State Parkway to Route 3 West (Note: Left exit). Take Route 3 West to Route 46 West (about 2 miles). Proceed on Route 46 West to Route 23 North (appx. 6 miles). (Note: Bear to the right on this exit.) Follow Rt. 23 North to Route 202 - Alt 511 - Boonton/Lincoln Park Exit (appx. 1 mile.). Turn left at end of exit ramp. Go appx 200-300 feet, then turn right on Taylor Dr. (Masonic Lodge and First Union Bank on corners). Turn right on PAL Dr. The PAL Parking lot and building will be immediately visible. Note: You can also take I-287 to I-80 and follow the intructions below.

From West/Interstate 80

There isn't an exit off of I-80 for Rt.23. Exit at Rt. 46 East in Parsippany. Continue on 46 East until you get to the exit for Rt. 23 North. This will be several miles. (The Landmark is Willowbrook Mall.) Once you are in the exit attempt to stay in the center lane and be alert. Follow directions for Rt. 23 North above.

(The Mechanical Music Extravaganza will be held at the Wayne Police Athletic League Building, 1 Pal Dr., Wayne, New Jersey, 07470.)

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